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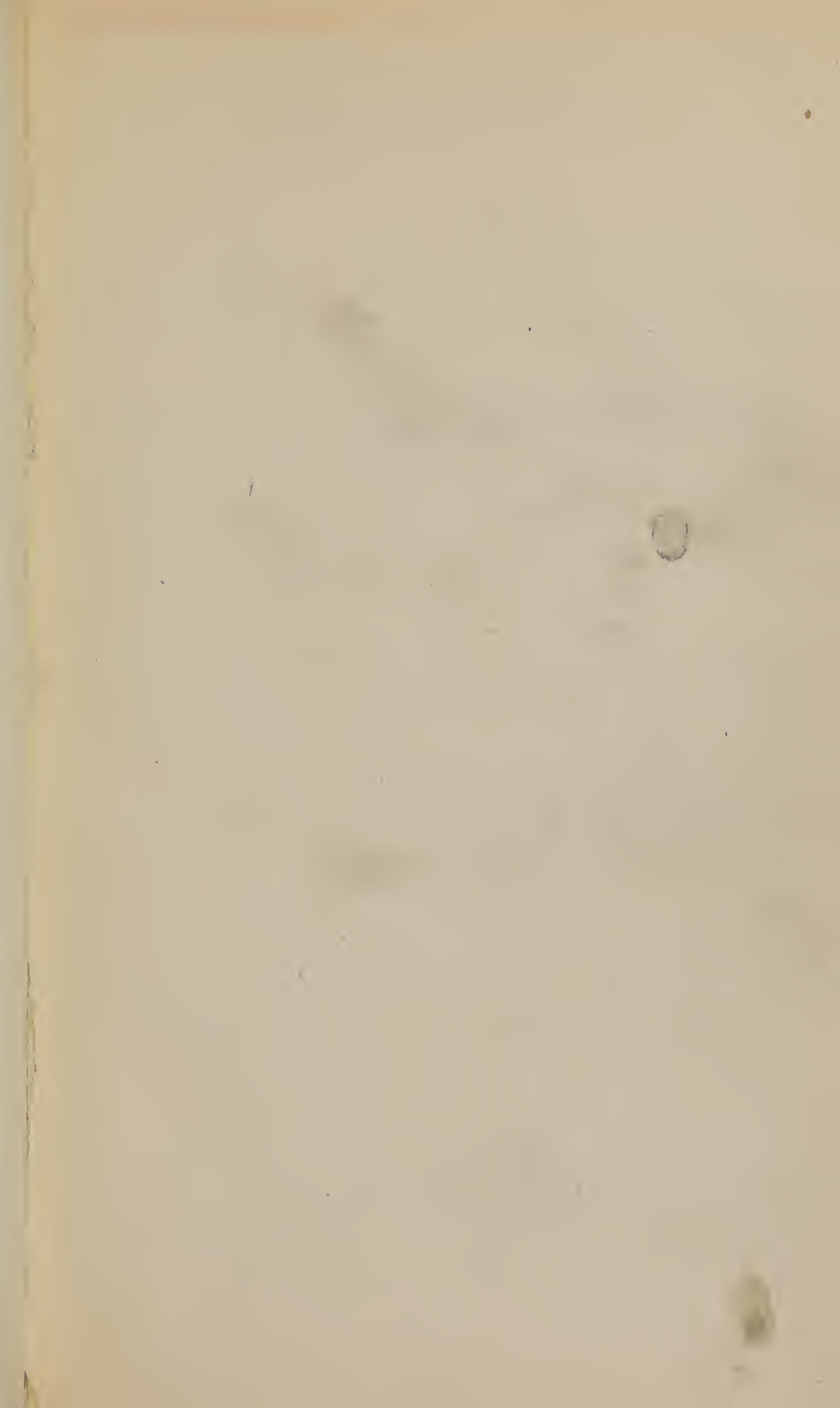
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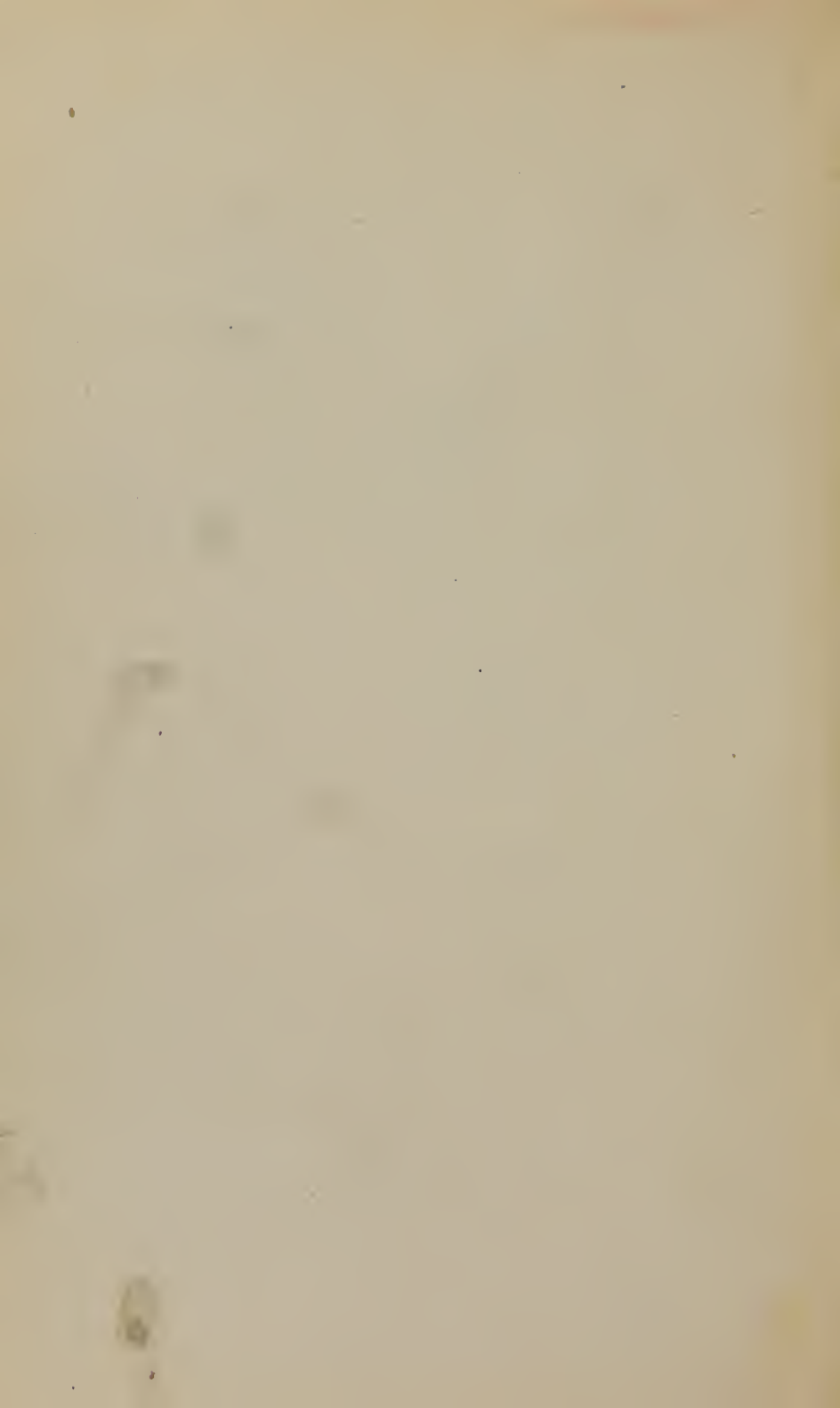
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NATIONAL

Surgical Institute

“LIFE IS NOT TO LIVE BUT TO BE WELL.”

INDIANAPOLIS, IND.

PUBLISHED BY THE NATIONAL SURGICAL INSTITUTE.

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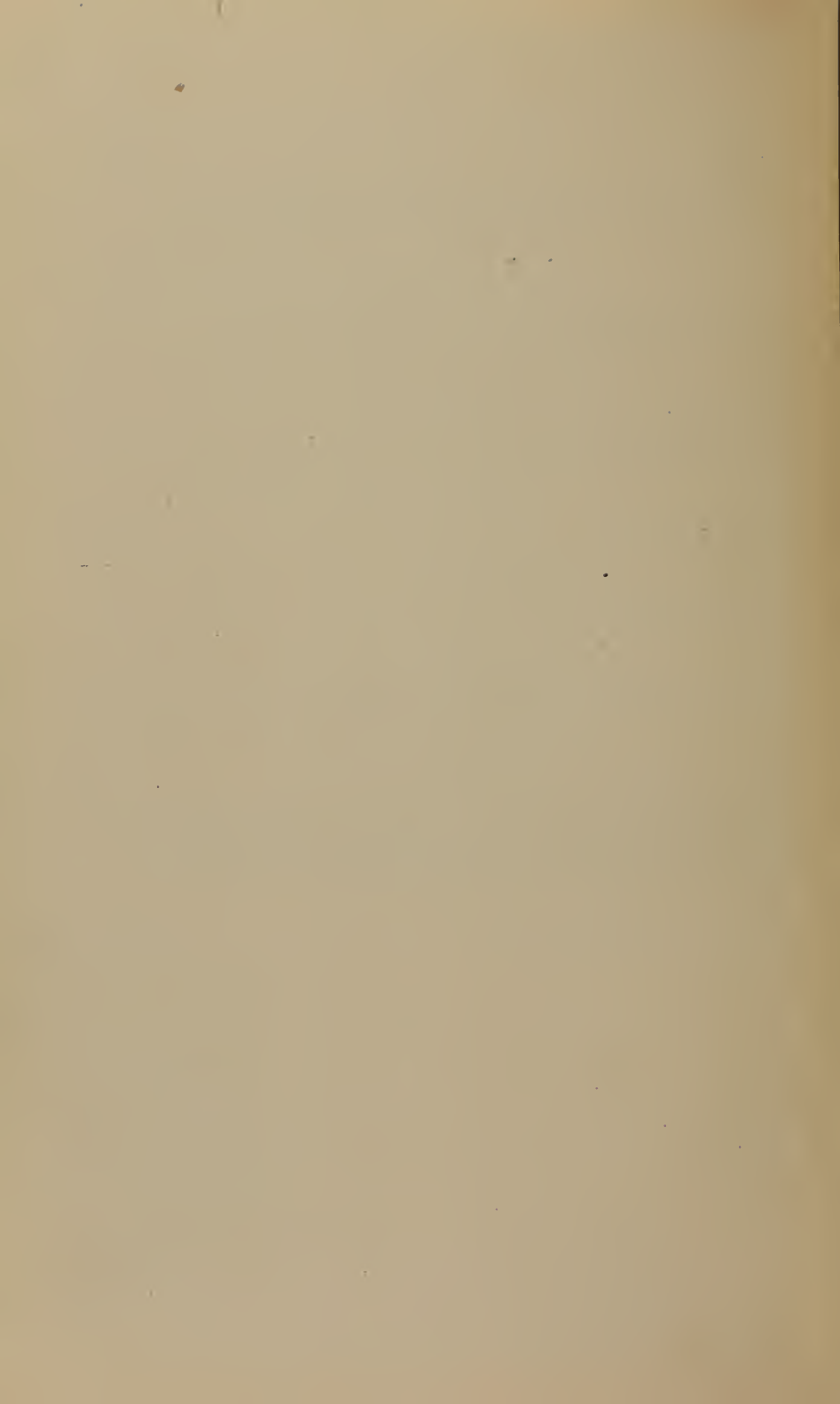
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PREFACE.

IN presenting this brief work to the public, the intention is to give a better knowledge of the history, objects and facilities of the NATIONAL SURGICAL INSTITUTE and its Departments than can possibly be conveyed by letter or circular. The increased correspondence growing out of the wide-spread reputation of the Institute, renders some such medium of information necessary, but it will not prevent a response by letter to any application for further particulars or more explicit details.

We shall strive to present the most important facts in a plain and comprehensive manner, free from the professional technicalities and Greek and Latin phrases commonly used by medical writers.

While endeavoring to impart a knowledge of our great enterprise, in behalf of suffering humanity, we have neither time nor inclination to engage in controversy with those who differ from us in practice or opinion. An experience of sixteen years in the successful treatment of every species of deformity and bodily injury, gives us the right, without rendering ourselves liable to the charge of egotism, to assert our views, however greatly they may differ from the traditional and accepted theory and practice of medicine.

While the burden of our thoughts and labor is devoted to the restoration of the suffering and deformed to health and physical perfection, we should be unfaithful to humanity and to ourselves if we failed to give timely warning and advice to those who, by constant violation of nature's laws, are fast becoming the victims of pain, disease and deformity. If physicians, like guardian angels, were ever pointing out the dangers arising from a disregard of these laws, there would be inconceivably less sickness and misfortune to relieve.

No more important subject can come within the range of human thought than the laws which govern the physical system.

The mind may roam untrammelled through limitless realms of space, and seemingly forget its earthly home; yet the fairest castle must have solid foundation. If there is no root there can be no fruit. The most powerful and the most delicate machinery can not be propelled in mid-air, but must have foundation and frame work to support and sustain it, else its movements must cease.

As surely as death comes to all, so surely is the time of its final coming greatly under our control. Neglect or ignorance will cause the injury or destruction of the most delicate as well as the most substantial piece of machinery, while with proper care and attention it may be made to run an indefinite length of time. We greatly fear that these admonitions will not be heeded; and the sad thought will obtrude itself that, with a full knowledge of these truths, self-interest is sacrificed, health is destroyed, and splendid wrecks are strewn along life's pathway. If we start on a long and perilous voyage, will we not inquire about the ship in which we trust our life? Would we not desire to know that it was perfect and strong, its hull and machinery safe, sound and reliable, and that it was in every respect seaworthy?

Are we not all mariners on life's tempestuous, uncertain ocean? And are our barks safe and sound, and do we understand how to meet and overcome all obstacles and emergencies that may confront us on the way? Shall we wreck before our sails have fairly caught the breeze; or, escaping the perils of youth or early manhood, go down in mid-ocean, in the prime of life and in full possession of mental power; or shall we make a safe and happy landing on "the other shore," with silvery hair and with life's fullest, choicest cargo? These wrecks are not confined to the drunkard, the libertine, or the glutton; but they include artists, scientists, students, business men, school children, and representatives from every walk and station in life.

Many strange facts have been developed in our inquiries, in the comparatively unexplored field of deformities. One is that full blooded Negroes or Indians almost never have club feet, hare lip, cross eyes, or paralysis (except from physical injury). If there is an exception, we would be thankful for the address.

These facts hold good in the brute creation, showing that the nearer we approach to mere animal life the nearer we arrive at

physical perfection; and that the higher we ascend in the scale of mental culture and brain development, the weaker the physical system becomes, and the more prone it seems to be to leave its work unfinished, and maintain but feeble action.

We can readily see how this condition, acquired in the parent, may be transmitted to the child. It is naturally asked, should mental culture cease, that the physical may be developed? Are they antagonists, and not in harmony? Must one sink that the other may ascend? Not so! But our *carelessness* in physical culture must not increase with our zeal for learning. Both must be elevated and cared for, as inseparable and indispensable concomitants; and our mental development may yet attain heights far more sublime, with physical system far more complete.

We have all read the horrid tales of Hindoo worshipers, with arms fixed in one position for years, to appease or please their God! These limbs become entirely useless and immovable. So any part of the system may lose its power from want of use. Are we not responsible for the reason given us and its action? We can not escape the responsibility, but must discharge our duty or pay the penalty. Physical exercise should not be neglected; neither should it be forgotten that periods of rest and sleep are an essential to both mental and physical vigor.

INTRODUCTION.

THE announcement by a circular, or by the press, of an institution of an ordinary kind, in the beaten path, excites no particular interest; but when something unexpected or new appears, bearing upon its face opposition to old usages, the first impulse of most persons—unless the necessity for the innovation be made plain—is to question and condemn. We are all creatures of habit; we love to recall the landmarks of the past and adopt them as fixtures for life. We naturally cling to old methods of thought and old forms of action. It is neither easy nor pleasant to relinquish the teachings of youth or the convictions of more mature years. It happens, therefore, that men almost always resist the conclusions of science if they interfere with preconceived notions or prejudices, and especially if they establish the fact that a lifetime has been spent in the practice of errors and abuses, instead of having served the cause of truth and humanity. How fondly did the old philosophers cherish their theories in relation to the earth! And with what dismay and opposition did they receive the discovery of Galileo, that it is round, and that, instead of being stationary, it revolves on its own axis and moves in its celestial orbit. Again, how the medical world denounced Hervey's theory of the circulation of the blood, simply because it proved the humiliating fact that thousands of years had been spent in ignorance and stupidity. And however easy it is for us, of this day and generation, to look back and condemn the false theories and incredulity of the past, we are blind to the fact that in many respects our minds may be overshadowed by the same dark clouds of prejudice and error.

To make a particular application of these general remarks, we need only a brief retrospect of our individual experience, to convince us that the theory and practice of medicine are constantly changing with the advancement of science and diffusion of knowl-

edge. It is absurd to say that men have mastered the whole science of medicine. Such a claim has no foundation in reason, and is not justified by the developments in any other branch of human knowledge. It is the province of true science to discard the errors of the past and press on to better and truer things. While, then, it is noble to admit the wrong and espouse the right, it argues the utmost degree of bigotry and egotism on the part of any physician to flippantly condemn new remedial agents, simply because he does not understand them, or because they are beyond his reach. Equally, nay, still more culpable, is it for him, through vanity and avarice, to attempt the treatment of diseases and deformities which he has neither the skill nor appliances to cure and correct. The days of seatons, blisters, blood letting, moxas, red hot irons, salivation, &c., were the dark days of medical science. Like torturing fiends in pandemonium they trifled with their poor victims. These horrible practices of the past are too well known by all intelligent persons to be now conceded as the perfection of science. Therefore, suffering reader, when your family physician attempts to decry or ridicule the latest discoveries in the healing art, remember that he may be actuated more by self-interest than by your interest, and that jealousy and prejudice unite to induce him to deceive you.

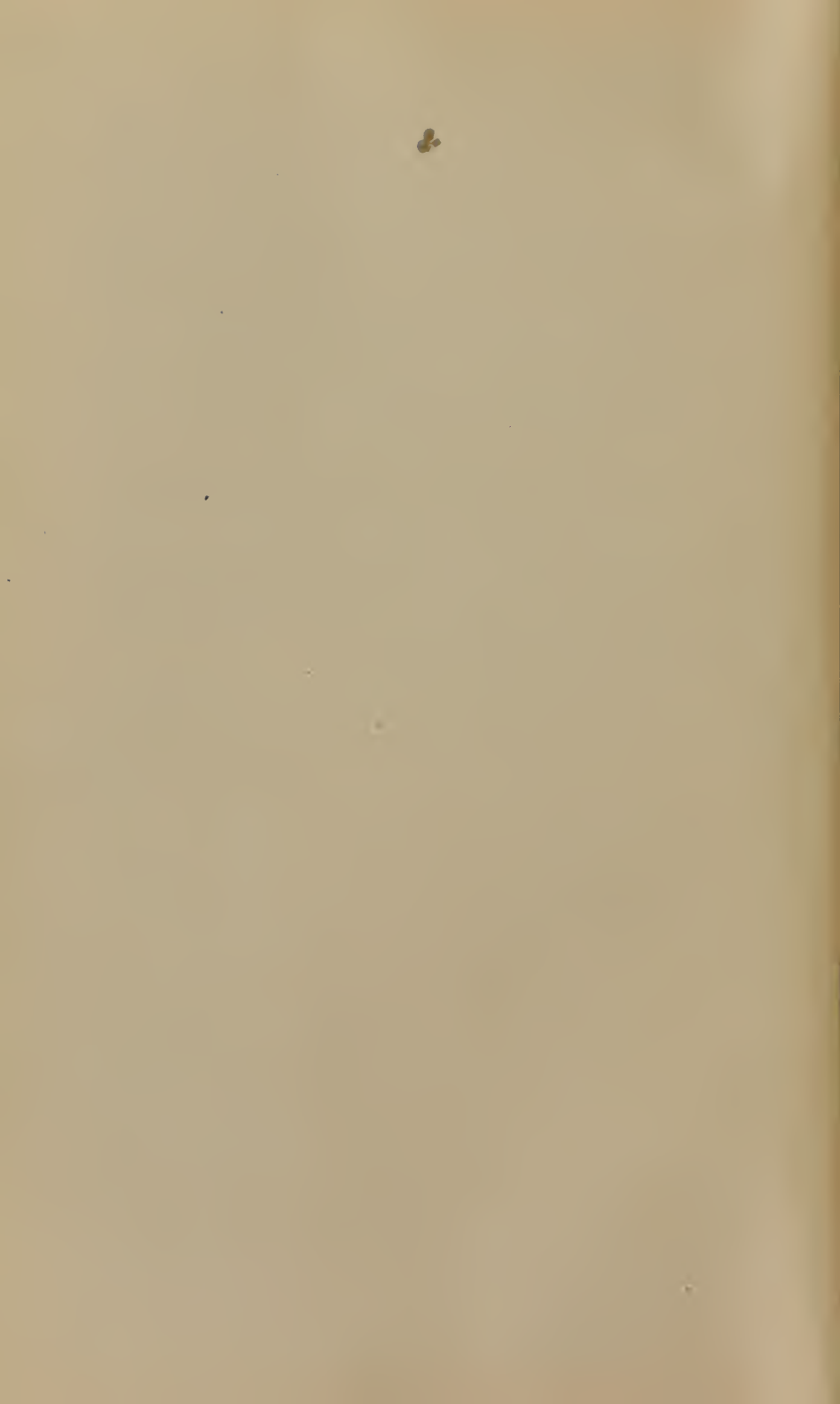
The practice of specialties has always been denounced and ignored as "quackery" by the medical profession. This term quackery is a favorite word with the old school, hide-bound practitioners. They apply it to everything new, and especially to everything in medical science which they do not understand. To avoid the imaginary odium which they have succeeded in attaching to the practice of specialties, many honest but timid physicians are compelled to scatter a meagre amount of intelligence over a vast field of practice, thus sacrificing human life and comfort, and their own reputation; whereas, their ability and research, concentrated upon a single object in medical science, would elevate them to the rank of benefactors of mankind.

Another rigid rule of the regular code of medical ethics is that no physician shall advertise in the newspapers or through any other medium of print. This, of course, does not prevent any amount of gratuitous advertising by patients and professional

brethren. All physicians are exceedingly anxious that their names should be extolled before the public and every meritorious act made public, but in some private or underhanded manner, instead of by the press. While pretending to deprecate and condemn advertising, they are constantly on the alert for every kind of illegitimate puffery. We leave it to the candid reader, with a proper appreciation of the value of legitimate advertising, to decide which course is more honorable and advantageous.

But our object is not to discuss the merits and demerits of the allopathic, homœopathic, or other theories of practice. It is rather to point out the means of relief to the discouraged and afflicted.

In the perusal of these pages, we trust our readers will exercise the candor and liberality they would ask if called upon to vindicate their own religious, political, or social views. Above all, their judgment should not be warped and their inclinations checked by those who have failed to give them relief, and who know nothing of the character and facilities of the NATIONAL SURGICAL INSTITUTE and its Branches.



THE National Surgical Institute.

CHAPTER I.

INCEPTION OF THE ENTERPRISE—A SAD ILLUSTRATION OF HEROIC PRACTICE—HUMANE CONVICTIONS—COMMON SENSE REFLECTIONS.

LIKE every other great and philanthropic enterprise, the NATIONAL SURGICAL INSTITUTE had its origin in sympathy for individual suffering. As illustrating how a seemingly unimportant event may become the starting point of a great movement, a brief notice of the origin of this Institution can hardly fail to prove interesting.

In the year 1856, during a course of medical lectures in one of the principal hospitals in our country, the founders of the Institute had their attention attracted and intensely fixed by the case of

A LITTLE SUFFERER.

From disease of the spine, a little girl some five years of age, who had been presented for treatment to a surgeon of skill and celebrity, then in charge of the hospital. This was the story of the little victim of cruel but orthodox treatment: When brought to the hospital, her parents were told that her case would readily yield to judicious treatment, but that she must remain in the hospital under the immediate care of the surgeon, and might be obliged, for some months, to lie on her back in bed.

The necessity of a separation from their child was very trying to the parents, but their exceeding love and the hope of relief reconciled them to any sacrifice for her sake. Positively assured of her speedy cure, they went home with joyful hearts, little dreaming of the cruel ordeal their child was to undergo.

Grieved, terrified, alone with strangers, the poor little exile from home was placed in bed, large blisters were applied to her back, upon which she was compelled to lie through long days and nights of intense suffering. As the sores healed, fresh irritants were applied, and the torture was renewed. Days and weeks wore away with no change excepting great reduction of flesh and strength, increased pain, and pallor of the sunken cheeks. When, in the slow progress of the torture, it was deemed necessary to resort to more vigorous treatment, the seaton was ordered. It was before chloroform was so generally used to dispel the terrors of surgical operations, and it was like witnessing a scene of the inquisition to behold the little sufferer in the hands of the surgeon and attendants. The emaciated form was turned on the side, nearly on the face, and the inflamed and irritated skin along the spine was lifted between the fingers, and the cold steel forced through, until a succession of seatons was placed in line. The silken cords were ordered to be drawn backwards and forwards, daily, through the suppurating wounds, until a plentiful discharge was induced. The child, meanwhile, was forced to lie on her back, and to aggravate her trials, was given all sorts of nauseous drugs, in the delusive hope of building up the constitution. Time dragged on, and as life seemed slowly but surely ebbing, more heroic treatment was resorted to. The seatons were removed, and the fiery, blazing "moxa" was put in requisition. The child begged piteously to be allowed "to go home," or left to die in peace. Of course she grew weaker every day, and less able to offer even the feeble resistance of shrieks and moans to the horrors inflicted in pursuance of orthodox teachings. The doctors were in despair, but were eager to give relief for fear that death might intervene.

Having been taught that "counter irritation" was the "sheet anchor" of the profession in such cases, they determined to exhaust every power of that treatment. Accordingly, the "actual cautery," or red hot iron, was next to be employed; but before its application the mother of the child arrived. Her feelings may be imagined but not described, when, instead of the little darling recovered or recovering, she had so confidently hoped to see, she found a wreck, a skeleton, which she would never have recognized but for the eyes that grew brighter at her coming, the

wasted arms that clasped tightly and pleadingly around her neck, and the feeble cry: "Mother, dear mother, take me home."

How her soul recoiled with horror, and her heart stood still with pity for her darling! With all the strength of a mother's love she appealed from further torture, preferring that her child should live deformed rather than be offered a sacrifice upon the altar of ignorance or orthodoxy.

The little sufferer was taken home, where she was given plenty of fresh air and wholesome food. After her sickening wounds were healed, she was allowed gentle exercise, and her health began to improve. She gained some flesh, and lived for years comparatively free from pain, but dwarfed in stature and sadly deformed.

HUMANE TREATMENT.

This case, with its revolting history, suggested to the writer's mind the necessity for a humane and rational treatment of deformity and disease. The thought presented itself with startling force, that if this was the best that medical science could do for such a case, it was not worthy to be called a science, and still less to be practiced as such. From this sprang a resolution on the part of the writer to seek a better way, and a determination that if science and reason could possibly afford relief, a life's study should be devoted to the amelioration of such cases.

At the threshold of his investigations, the following inquiries presented themselves as

QUESTIONS TO BE CONSIDERED.

What is to be hoped for from the old method of treatment?

Is it possible, while confined in bed, prostrate on the back, to have sufficient exercise to induce and maintain a healthy growth of the system, a proper formation and circulation of the blood, or a perfect assimilation of food, digestion, and action of the bowels?

Is it possible, further, to maintain a healthy respiration, and development of the lungs, while pent up in impure air?

Will destruction of the flesh, fetid ulcers, and discharge of offensive matter, build up the constitution and insure its strength?

Will irritation and torture of the spine drive inflammation and disease from the body?

Will this irritation prevent spasmodic contraction of muscles and curvature of the spine when the bones are diseased and there is nothing to support them?

Would it not be a strange practice, if we had a crooked tree in our orchard that was bending to the ground, because one side of it had been blighted or destroyed, to bruise the bark on the opposite side, or chop it to pieces, for the purpose of restoring the diseased or decayed part?

Is not childhood the time for development?

Is it possible to develop the human frame, in the fullness of its mysterious and wonderful mechanism, without the air and sunshine and exercise that Providence designed and nature requires?

What degree of condemnation and odium is due to the cruel practices which we have described, we leave for humanity and the intelligent public to pronounce. It is not to be wondered that parents dread and physicians distrust such treatment.

Had we, to-day, no more humane method at our command, conscience would not permit us to offer a ray of hope to the afflicted.

But the object of our life has been to discover and adapt every means of humane, pleasant and effective treatment; not only for such cases as the one we have described, but for all other serious and painful maladies that come within the range of our special practice.

The case mentioned is only one of many of a similar character, which may be daily seen in the ordinary treatment of such maladies as diseases and deformities of the joints. None but the sufferer and his friends can realize the cruel torture and wretched consequences! Pain, amounting to exquisite agony, shocking deformity and loss of limbs, are the common sequel! The number of valuable lives blighted or destroyed is sickening to detail.

SYSTEMATIC RELIEF.

The great question, then, in the minds of the founders of the NATIONAL SURGICAL INSTITUTE, was how systematic relief could be afforded this large class of sufferers. The effort must, at first, be very much of an experiment, and would necessarily involve a

vast expense. The most reasonable plan suggested, was the treatment of a number of similar cases at the same time. In this way, the different methods and remedies could be fairly tested, the results classified and made available for future use. It was self-evident that this aim could never be accomplished in a private practice. It was likewise plain that public charitable institutions, being mere asylums for the indigent and afflicted, could not be made available. Even had these hospitals possessed the requisite accommodations and appliances, *the code of ethics* by which they were controlled closed the door to innovation and improvement. The rigid regulations of "the faculty," which have condemned countless sufferers to death, rather than have them cured by irregular means, would allow no departure from stereotyped rules. The honored shades of Esculapius and Galen imperatively forbade the practice of any new means and appliances in the healing art, while the medical traditions of past centuries required a strict adherence to the old and accepted plan of salvation!

None felt this truth more keenly than ourselves, whose medical education had been according to the strictest professional code. Every other way being closed against the progress of reform, nothing remained but to brave the storm of opposition by erecting a large private hospital, and notifying the afflicted, in a public manner, that accommodations and remedies had been provided for their relief.

THE ENTERPRISE AN ASSURED SUCCESS.

Some sixteen years have passed since that determination to relieve the afflicted was carried into effect, and the most gratifying and assured success has rewarded the pioneer enterprise. The NATIONAL SURGICAL INSTITUTE, inaugurated under the most discouraging auspices, and with a limited patronage, is to-day a proud monument of liberality and skill; and, prominent among the most philanthropic enterprises of the age, is fulfilling its great mission of subserving to the relief of human misery, every discovery, invention and improvement, within the scope of science and at the command of money. The eminent success attained can not be over estimated. The thousands made happy, the

magnanimous treatment of the poor, the moderate fees demanded of the rich, and the explicit and candid manner in which all are treated, have gained for the Institute the confidence and support of good people throughout the country. Furthermore, the Institute has been endorsed and sustained by all the intelligent physicians who have availed themselves of an opportunity to study its claims to merit by visiting the Institution.

So far from shunning notice or investigation, it courts the closest scrutiny and the widest publicity. We claim that our practice is founded on nature and common sense, that it is strictly scientific in character, and that it accomplishes incomparably greater results for less outlay and with infinitely less pain, than any other treatment. We should speak with less confidence of our system if it were a mere theory; but long years of practice, with thousands of cases of suffering relieved, diseases cured, and deformities removed, leave no room to doubt its merit or question its efficiency. Nothing but the inherent merit of our system, and a firm confidence in its ultimate success, could have brought the Institute from its small beginning to its present mammoth proportions and wide reputation. Every person that visits it confesses admiration of its wonderful and ingenious appliances for the treatment of disease; and every patient who goes forth from its walls, relieved from suffering and deformity, and restored to health, becomes a walking advertisement of its scientific methods of practice, its honorable management, and its pure, social atmosphere.

Thus encouraged, and invoking the same providential aid which has sustained the Institute in the past, the founder and managers renew their efforts with unfaltering determination to extend relief to suffering humanity in the future.

Missing page 21-28

NUMBER OF CASES TREATED.

Talipes (Club and Crooked Foot):

Equinas,	281	Calcaneus,	141
Varus,	862	Equivarus,	162
Valgus,	426	Equivalgus,	82

Diseases and Deformities of the Hip Joint:

From Coxalgia,	1,012	From flattening and elongation of Acetabulum,	21
From Rheumatism,	181	From relaxation of Teres and Capsular,	49
From contraction of the Muscles,	1,131	From Exostosis,	4
From Paralysis of the Muscles,	275	From Fracture,	26
From Synovitis,	263		

Diseases and Deformities of the Spine:

Spina Bifida,	21	Anterior and Posterior Curvature from paralyzed Muscles,	187
Bent Spine from Caries,	846	Lateral Curvature of Lumbar Vertebra,	350
Of the Cervical Vertebra,	210	Lateral Curvature of Dorsal and Lumbar,	846
Of the Dorsal Vertebra,	386	Lateral Curvature of Dorsal and Lumbar and Cervical,	24
Of the Lumbar Vertebra,	250	Torticollis,	45
Same, connected with Lateral Curvature,	132		
Anterior and Posterior Curvature from Contracted Muscles,	120		

Deformities of Fingers:

Congenital Deficiency,	10	From Burns,	110
Congenital Webb,	15	From Injuries,	156
Congenital Deformity,	35	From contraction of Muscles,	220
Congenital Flexion,	6	From Paralysis,	426
From Rheumatism,	158		

Deformity of the Ankle Joint:

From Necrosis,	61	From Relaxed Ligaments,	5
From Synovitis,	327	From Paralysis,	460
From Fractures and Injuries,	465	From Congenital Malformat'n,	15

Flexed, Deformed, Anchylosed and Diseased Knees:

From Tuberculosis,	241	From Traumatic Inflammation,	21
From Necrosis,	96	From Congenital Malformat'n,	61
From Synovitis,	328	From Contracted Flexor Muscles,	268
From Exostosis,	2	From Maltreated Fractures,	21
From Rheumatism,	379	From Paralysis Recti Muscles,	210
From Fractured Patella,	8		
From Burns,	12		

Deformities of Tibia, Fibula and Femur :

From Necrosis,	360	From Bow Legs,	38
From Ununited or Malunited		From Anterior and Posterior	
Fractures,	24	Curvatures,	10
From Moritis Ossium, . . .	21		

Hernia, 61.

Tumors Mammary Glands, 49.

Syphilis, 800.

Gonorrhœa, 300.

Skin Diseases, 600 :

Of which the following have been most frequent :

Erythematous Eruptions,	Scrofuloderma, .
Lichenous Eruptions,	Kelis,
Eczematous Eruptions,	Elephantiasis,
Impetiginous Eruptions,	Naevi Vasculosi,
Scorbutic,	Chloasma,
Lupus,	Acne.

Indolent Ulcers, 410.

Varicose Ulcers, 270.

Diseases and Deformities of the Ear :

Operation to restore Congenital Deficiency of External Ear,	20
Operation to restore Deficiency of External Ear caused by wounds, .	4

For Deformities of the Face :

From Burns,	41	From Nevus,	20
From Ptyalism,	70	From Anurism of Facial Ar-	
From Tumors,	21	tery,	6
From Lachrymal Fistula, .	12	From Gunshot Wounds, .	10

Plastic Operations for Deformed Noses—making new ones :

To restore Noses destroyed by		To restore Noses destroyed by	
Ptyalism,	23	Caries,	16
To restore Noses destroyed by		To restore Noses destroyed by	
Syphilis,	41	Injury,	46
To restore Noses destroyed by		Hypertrophy of Nose, . .	3
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Fibrous Tumors in the Mouth, 12.

Cancer of the Tongue, 4.

Enlarged Tonsils, 30.

Necrosis of Inferior Maxillary, 8.

Tracheotomy, 2.

Operations upon the Eye :

For Strabismus,	75	Pterygium,	25
For Cataract,	30	For Iridectomy,	10
For Ectropion,	42	For Exterpation,	5
For Entropion,	31	For closure Nasal Duct, . .	20
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Deformities and Diseases of the Wrist :

Tuberculosis,	100	Injuries,	50
Synovitis,	89	Paralysis,	250
Bursa Mucosa (Tumor), . .	120	Contraction of the Muscles, .	150
Rheumatism,	160		

Diseases and Deformities of the Elbow :

Congenital Malformation, . .	10	Synovitis,	68
Caries,	58	Contraction of Muscles, . .	55
Tuberculosis,	51	Injuries,	91
Luxation of Ulna,	40		

Diseases and Deformities of the Shoulder:

Paralysis of Muscles,	75	Rheumatism,	46
Relaxed Ligaments,	102	Luxations,	46
Synovitis,	40		

Plastic Operations:

For Hare Lip, Single	150	For Deformed Lips from	14
For Hare Lip, Double,	120	Syphilis,	14
For Deformed Lips from Burns,	42	For Deformed Lips from	
For Deformed Lips from Ptyal-		Cancer,	21
ism,	65	For Deformed Lips from	
For Deformed Lips from		Varix Tumors,	5
Injuries,	60	For Deformed Lips from	
For Deformed Lips from		Aneurism,	1
Facial Paralysis,	5		

Diseases of the Internal Ear:

Catarrh,	75	Ulceration of Meatus,	95
Chronic Otorrhœa,	221	Penetrated Tympanum,	30
Inflammation of Internal Ear,	20	Cerebro Meningitis,	5
Disease of Mastoid Cells, . .	30		

Diseases of the Rectum :

Hemorrhoidal Tumors, External,	426	Fissure,	31
Hemorrhoidal Tumors, Internal,	918	Ulceration,	36
Stricture,	58	Syphilitic Affection,	15
Polypus,	12	Cancerous,	10
		Fistula,	620

Deformities and Diseases of Genital Organs :

Extrophy of Bladder,	10	Diseased Testicle,	36
Hydrocele,	175	Prostatorrhœa,	196
Varicocele,	150	Spermatorrhœa,	861
Cystocele,	41	Stricture Urethra,	120

Uterine Diseases :

Ulceration,	520	Leucorrhœa,	874
Hyperthrophy,	260	Uterine Polypus,	5
Inflammation, Acute and Sub-acute,	285	Fibrous Tumors,	10
Retroversion,	31	Ovarian Tumors,	41
Anteversion,	120	Vesico Vaginal Fistula,	18
Prolapsus,	768	Lacerated Perineum,	11

Nervous Diseases :

Infantile Palsy,	860	Myelitis, Chronic,	264
Hemiplegia,	1,275	Spinal Meningitis,	378
Paraplegia,	680	Spinal Congestion,	84
Paresis,	250	Spinal Irritations,	546
Myalgia,	10	Lead Palsey,	21
Sensory Palsy,	40	Progressive	
Vertigo,	10	Muscular Atrophy,	170
General Nervousness,	50	Chorea,	41
Hysteria,	75	Insanity from Opium,	2
Cerebro-Spinal Sclerosis,	15	Spermatorrhœa,	31
Paralysis Agitans,	50	Progressive	
Cerebral Anæmia,	158	Locomotor Ataxia,	20

Opium Eaters, 185.

Stammering, 45.

Sore Eyes :

Our Eye cases, including charity cases, would exceed fifteen hundred.

Diseases of the Conjunctiva,	600	Diseases of the Retina,	100
Diseases of the Cornea,	230	Amblyopic Affections,	20
Diseases of the Iris,	90	Diseases of the Choroid,	18

Diseases of the Ciliary Body and Sclerotic,	20	Glaucoma,	10
Diseases of the Crystalline Lens,	48	Diseases of the Lachrymal Ap- paratus,	39
Diseases of the Vitreous Hu- mor,		Affections of the Muscles of the Eye,	75
		Diseases of the Orbit,	10

Diseases and Deformities of the Shoulder :

Paralysis of Muscles,	75	Rheumatism,	46
Relaxed Ligaments,	102	Luxations,	46
Synovitis,	40		

Plastic Operations :

For Hare Lip, Single,	150	For Deformed Lips from Syph- ilis,	14
For Hare Lip, Double,	120	For Deformed Lips from Can- cer,	60
For Deformed Lips from Burns, .	40	For Deformed Lips from Varix Tumors,	5
For Deformed Lips from Ptya- lism,	60	For Deformed Lips from An- eurism,	1
For Deformed Lips from In- juries,	60		
For Deformed Lips from Facial Paralysis,	5		


MATERIAL AND EXPENDITURES.

Chamois Skin, for lining braces,	\$1,003 48
Strap Leather, for apparatus,	1,903 00
Sheep Skin, for lining apparatus,	256 80
Belting, for machinery,	261 00
Kid and Morocco Leather, for trimming apparatus,	1,682 00
Felting, for trimming apparatus,	472 00
Cotton Wadding, for padding braces,	205 32
Cotton Flannel, for lining apparatus,	1,306 00
Sheet Steel, for making apparatus,	4,306 16
Bar Steel, for making apparatus,	6,689 24
Repairing Furniture, in offices,	1,249 16
Copper Rivets, for apparatus,	987 80
Brass Rivets, for apparatus,	794 65
Iron Rivets, for apparatus,	586 40
Silk Thread,	398 23
Cotton and Silk Thread,	230 00
Iron, for apparatus,	1,299 32
Emery, for polishing,	89 60
Rubber Pumps,	1,080 63
Elastic Rubber, for bandages,	769 60
Rubber Ice Bags,	418 64
Rubber Molds,	655 52
Rubber Tubing,	1,002 96

Rubber Webbing,	\$106 80
Rubber Skerred,	1,267 04
Sheet Rubber, for receivers,	793 24
Boxes, for packing medicines and apparatus,	1,890 60
Glass Bottles, for medicines,	2,598 44
240,840 yards cotton bandages, (138 miles,)	1,075 04
Hardware,	1,471 74
Files,	227 80
Repairing steam engine, boiler, and machinery,	1,895 00
Brass Tubing,	1,060 84
Freight and Express charges,	1,559 92
Buckles, for apparatus,	177 20
Sundries, embracing various articles in the drug department,	10,200 96
Surgical Instruments,	1,758 56
Books, for replenishing Library,	2,272 00
Coal, for engine and offices,	3,321 20
Silver Plating, for apparatus,	226 00
Electro Plating, for printing,	1,758 90
Engraving and Printing,	15,107 80
News, Book and Manilla Paper,	35,496 00
Drugs,	15,864 00
Receivers, Steam Cans, Brackets, etc.,	3,060 60
Gas Fitting, Plumbing, etc.,	1,454 16
Decorating and Paper Hanging,	1,580 00
Lumber, for repairing buildings,	1,851 56
Repairing, masonry and brick work,	1,412 80
Insurance on Institute Buildings,	4,004 14
Grindstones for polishing Steel,	85 52
Taxes on Institute Buildings,	2,246 80
Sewerage,	840 00
Folding and Mailing Circulars,	4,599 96
Postage,	44,208 00
Labor,	73,957 80
Salaries,	77,971 90
Anatomical Casts and Models from Paris,	400 00
Anatomical Charts and Models from London,	350 00
Rubber Springs,	530 00
Steel Springs,	75 01
Brass Wire,	67 50
Blank Books,	650 30
Stationery and Paper,	12,308 54
Emery Wheels,	576 00
Improvement in Gymnasium Department, including new Combination and other Movement Machines,	3,094 00

CHAPTER IV.

*GENERAL CONSIDERATIONS—SUCCESSFUL AND UNSUCCESSFUL CASES—
WHERE TO APPLY FOR CORRECT INFORMATION—FAILURE TO PRO-
VIDE ADEQUATE FACILITIES FOR THE DEFORMED AND CRIPPLED—
ADVERTISING—PLAIN, COMMON SENSE TALK.*

RDINARILY, when we receive a circular from the directors of an institution of learning or beneficence, we depend largely upon their statement of facts respecting its merits, as any falsehood or misrepresentation would be damaging to their reputation and to the perpetuity of the institution. Receiving statements from more than one institution, we can judge which is the most worthy of patronage. In the case of the NATIONAL SURGICAL INSTITUTE, however, there are no other institutions of a similar character with which you may make comparison. The INSTITUTE is entirely original in design, organization and management. Its methods and appliances are based upon the latest discoveries of medical science, and have never before been introduced into any curative institution in this or any other country. For these reasons we deem it proper to state its object and work more fully. While there are surgeons at home, and in our large cities, ready to undertake the relief and cure of all kinds of cases, they often do so without being possessed of the necessary appliances, or a suitable institution in which to use them. It is important, therefore, that the public should be made fully acquainted with the merits of an institution which has discovered the true methods of treating chronic deformities and disease, and which has all the necessary appliances for treating them. The fact that this institution has for sixteen years continued its great work in the interests of the suffering and deformed, with its business yearly increasing, is, we submit, very strong assurance of its character. Our mission is far above the little ethical quibbles on a mere question of just how we shall notify the afflicted of the existence of the institution, or of the preparations made for their treatment. If a

starving man is informed where bread may be obtained, he does not stop to criticise the manner in which the glad news is conveyed, or to question the channel through which it may have come. It may be whispered to him in a dark closet, proclaimed by a newspaper, or brought on the wings of the wind. The manner of its conveyance does not concern him, nor can it affect the quality of the food.

There is nothing whatever about the SURGICAL INSTITUTE, save the style of its circular, to which the most technical stickler for the code can take exception, and we are content to leave this matter for those more interested in mere technicalities than we to digest, believing that right will triumph, and just means for the relief of the suffering be maintained.

If you have a suffering, deformed, or paralytic child, or if you are yourself suffering from some obstinate disease of long standing, what matters it how you hear of the SURGICAL INSTITUTE? The one thing of paramount importance is that you should hear of it in some way, and that you should become informed of its new methods and wonderful appliances for treating disease. Many of the old school practitioners would say: "Better let your child die than trust its care to physicians who advertise." We say: "A human life is worth saving, and human suffering ought to be relieved, even if the absurd requirements of the code have to be broken." As a matter of justice to all, we desire that information concerning the Institute and its managers should be obtained from unprejudiced persons, and from those whose opportunities of procuring it have been ample. We do not expect to escape criticism, and are even aware that we have enemies. Every good thing that ever existed has had its enemies, and no project for the relief and benefit of mankind was ever yet started that did not meet with opposition. It is even possible that some of those whom we have treated may speak ill of us. It would be very strange, if among the many thousands we have treated there were not some careless and unfaithful to their own interests; and the first impulse of such natures is to shift the burden of their own wrong doing upon other shoulders. Some men ruin themselves voluntarily by intemperate and pernicious habits, others by indolence and neglect, while others destroy themselves outright by suicide.

We can not submit to be held responsible for the negligence and misdeeds of others.

If the public desires correct and reliable information in regard to us, it certainly will not depend upon the statements of jealous competitors, or of patients who, by their own carelessness and neglect, have failed of cure. It should either investigate for itself, or else seek information from those who know, and especially from patients who, having been faithful to our directions and co-operated intelligently with our treatment, have been restored to health and strength. It should be borne in mind that the benefit of the cured patient begins just where the unbenefited one leaves off, and that it is therefore impossible for the latter to trace the subsequent steps of the former. To learn how any thing may be done, we go to those who have successfully accomplished it—not to those who have failed. And as we have many thousands who would gladly tell the story of their cure, we have permission to furnish their names and addresses to those who desire them. We think it fair to state that ninety out of every hundred cases that we treat, have been treated for the same maladies by other physicians before coming to us, and have been left uncured; hence our task is far more difficult than that of the general practitioner, because the cases which he can cure never come to us, while only those which he can not cure are left for our treatment. This every one comprehends at once; for if your family physician could cure you, you would not seek other help, or leave home for it.

In this connection, we would call attention to a great and sad truth which exists, and that is the total inadequacy of means provided for the cure of the thousands of deformed and helpless beings all over our land, whose lamentable condition cries aloud for help. Asylums are provided for the deaf, the blind, and insane; homes and charities for the indigent, sick and infirm; bastiles and reformatories for the vicious and the criminal; yet, alas! where shall the great multitude of diseased and deformed, numbering more than all of the above combined, find succor and relief? With a wonderful apathy or indifference, the wail of the indigent and suffering cripple is unheeded save at the house of alms, where necessary surgical skill and appliances are not to be found. The homes of the wealthy are also darkened by the

protracted and helpless deformity of many of their inmates. For this sad and lamentable condition the general practitioner deserves neither condemnation nor reproach. His legitimate work, if conscientiously done, enjoins study and responsibility enough, leaving little time for exploring a field so far removed from the legitimate sphere of his labor. He finds that to combat the invasions of acute diseases successfully requires the most untiring study, and the most acute observation, and brings enough responsibility to fully satisfy the most ambitious and aspiring members of the profession. The fact that over four hundred thousand crippled and deformed human beings in this country are without adequate and proper treatment, should suggest a great and momentous duty.

The grateful letters, of which we are in daily receipt, are a pleasing assurance to us that our efforts, in behalf of suffering humanity, have not been made in vain. Perhaps some of our readers may doubt that such cures are performed at the SURGICAL INSTITUTE, and say it is impossible, because the methods are new and not within the range of their personal observation. We too often doubt the existence or propriety of that which we have not seen; but the world would long since have been unornamented and unimproved if the generations of men had accepted only personal or individual deductions of truth. What, then, would have become of the inventions of printing, telegraphy, etc. Of the marvelous advance in medical science, we will speak in a separate chapter.

Some, again, object that we are *specialists*. To this we answer, this is our pride. We have devoted our talents, time and money to the study and relief of suffering and deformity, and, without vanity or egotism, feel ourselves better prepared to treat such cases than good physicians in general practice, who have not the necessary means and appliances. And we may be allowed to ask if, by the immutable laws of necessity, all men are not to a certain extent specialists. Some are created for one special act in life's drama, some for another; and he who tries to act all parts, ignoring the prime object of his being, is a bigot, slave or fool, for none but the Deity is universally good and wise. We might ask you, reader, are you not better at one business than another? Do you not like some parts of your business more than others? And are you not more successful

in conducting the business you like? Then you must allow us to claim that we were designed for the special purpose in life of relieving and curing these special diseases and deformities, having been endowed with peculiar taste and love and practical ingenuity for this great and noble work. In the treatment of ordinary fevers and diseases of the country, your physician would doubtless excel us; but with Institutions of original and most approved character, with ample means and every conceivable apparatus and facility, and with varied and valuable experience of having treated over thirty thousand cases, we do not consider ourselves vain or boastful in saying that it is in our power to excel, and effect cures impossible to them. If your physician is honest, and is not selfishly desirous of obtaining your money, he will admit our claims, and advise you to come to us for treatment. If your physician says "humbug," reflect whether he has cured you or charged you for not doing it, or if he proposes to undertake your case when he has not the experience and facilities to do it justice. Nothing is more certain than that even good practitioners of medicine have not the experience and means requisite to correct such deformities. Human life is too brief for one man to be a good general practitioner of medicine, ministering to the complicated ills of flesh, and at the same time a skillful surgeon, manufacturing and applying the multiplicity of apparatus and machinery necessary to success. It is the fault of the suffering reader if he allows jealousy and ignorance, on the part of his medical adviser, to prevent him from availing himself of the relief tendered by the philanthropy and skill of the NATIONAL SURGICAL INSTITUTE.

THE ADVERTISING BUGBEAR.

Of all the objections urged against the SURGICAL INSTITUTE by those who cannot understand, or who willfully misrepresent its purposes and operations, the most senseless and absurd is that against its advertising. When all other objections fail, this one is introduced. It has long been an established principal of medical ethics, that no doctor or medical institution must advertise, the theory, apparently, being that the value of a man's services, or of a new discovery in medical science, is depreciated by being made known to the public. Such an assumption is an insult to in-

telligent persons. It is one of the relics of a by-gone age which still clings to the medical profession, to the great detriment of its progress and usefulness. The simple fact is, that advertising is as legitimate and proper in the practice of medicine as in any other profession or business.

The object of advertising is to acquaint business and professional men with each others avocations and wants, and especially to inform the world of whatever is new or valuable in science, art, or literature. It is the only way to reach the masses; it is the only way to keep up the current of popular communication. Whatever is worth doing or worth offering for sale is worth advertising. Life is too short to trust to the people finding things out by their own efforts or by intuition—they must be informed, and the only way to do this is by advertising.

Men are entitled to a difference of opinion in this as on all other subjects, but the fact that one man, or set of men do not wish to advertise, does not make it disreputable for others to do so. Neither is the value of legitimate advertising lessened by the fact that some quacks, and some unprincipled scoundrels, make use of this means to deceive the people. It would be just as reasonable to assume that all doctors who do not advertise are learned and skillful, (an assumption which everybody knows would be false), as to assume that all those who do advertise are impostors or quacks. Doubtless, some quacks and impostors advertise, but there is a still larger number who do not. The whole question is of little importance, and we only allude to it because of the objections and criticisms of a few stickling physicians, who imagine they find, on this score, a strong point against us.

The following passages, from the *Journal* of the NATIONAL SURGICAL INSTITUTE, July, 1875, will suffice to show the weakness and folly of these arguments against advertising:

“We are confident that the few old foggy doctors who oppose advertising a good institution for the cure of deformities, will, when the light of progress convicts them of error, be as heartily ashamed as they are now of the old system of reckless bleeding, blistering, salivating, cauterizing, the prohibition of cold water and fresh air, etc., etc. And the doctor-ridden people will realize that their prejudice was blind, their judgment enslaved, and interest subverted to his selfish ends.

Many medical societies find it to the interest of some of their members to oppose advertising. Is that custom regulated by the Decalogue, by the Bible, by

the laws of our country, by any sacred obligation to man? Or is it an antiquated custom, clinging to a profession which was once, by its votaries, a sworn secret from the people, and thus kept, by solemn oaths to imaginary gods? * * *

For ordinary physicians to falsely proclaim extraordinary facilities and abilities is quackery. For thousands of ignorant physicians to quietly and unfairly, or by the influence of friends, gain the confidence of communities, and through their own ignorance destroy health and life, sadden homes, and populate graveyards, is the vilest quackery and vandalism, and is to-day cursing the American people under the cloak of the medical profession. Are doctors ever discharged from medical associations on account of ignorance, on account of crime, on account of maltreatment of patients, or too frequent death of patients in their practice, or life long suffering as the result of bad treatment? Is it the dear people who are so carefully protected, or are these rigid laws against advertising only for the protection of the doctors?

To say that a regularly incorporated institution like this, with ample buildings and all kinds of machinery, and every facility for curing surgical cases, conducted by regularly educated surgeons, of age and experience, should not be advertised, is simply ridiculous!

Men differ in religion, in politics, and in medicine; yet that difference makes neither a quack nor a humbug. And he that is most ready to debase his competitor is most debased.

A physician desiring a practice does not live who wishes his skill and knowledge unknown. And physicians who want to be advertised, are trying daily to have it done, through the mouths of friends and patrons who laud their skill and urge others to employ them. A nostrum vender mounts his goods box in the streets, and proclaims to the gaping crowds the virtues of his medicine; both are only cheap methods of advertising.

Every medical college, hospital, book, paper, and society is advertised.

Every doctor is anxious to have his name in the newspapers, reporting a great surgical operation, or the successful treatment of a case.

County and State medical societies 'resolve' to publish their proceedings (if the newspapers will do it for nothing).

Daily we see, going the rounds of the press, sensational reports of a great surgical operation, common or uncommon, by Professor or Dr. Smith or Jones, A. M., M. D., etc. The doctor, in the presence of his fellows, with a pharisaical frown, denounces the villainous reporter, who thus compromises the doctor's professional honor, while a ripple of joy soothes his angry soul, as he submits to the *eclat* thus obtained! What a farce! But a discriminating and intelligent public is not deceived; the dodge is apparent to everybody.

The labors, discoveries, operations, and experiences of learned and leading men in the profession ought to be advertised for public good.

If a community is wronged, it is not by advertising. Another wrong consists in physicians condemning and professing to ignore what they really desire; in pretending to oppose advertising, while in fact they are advertising most skillfully. Under this code the printer must be defrauded, or else be rewarded *sub rosa*, either of which is dishonorable.

By a few physicians, who see this circular, you will be told that it is a flaming advertising sheet, with horrid pictures to frighten or convince the stupid and credulous; and that, because it is an institution that advertises, consequently it is

a 'humbug.' We are not surprised that such doctors do not like to see this work, as it often is but a mirror, reflecting back into their faces sights of many horrible cripples which their ignorance, or want of suitable appliances, have produced. And we do not doubt that a cure of many of these poor helpless cripples would bring a blush of shame to their cheeks and discredit to their pretensions. And he who growls and howls the loudest is hurt the most.

Every picture in this circular is a true representation of a poor maimed creature who came to us uncured. But the conceited sneer of the ignorant or guilty physician does not bring back to the unhappy victim relief or happiness. And of all men, the doctor who has thus failed should be the last to play the 'dog in the manger!' when perhaps the very case in question brands him as a quack.

* * * * *

There are thousands of noble physicians, of high moral principles, to whom the above does not apply. They live above a life guided by blind prejudice or jealousy, and they are not the slaves of unmeaning, ridiculous, and antiquated customs; hence they send such cases to the SURGICAL INSTITUTE for relief. The Bible portrays to the world the existence of great moral deformities and diseases, and points to the remedy; and denials, wincing or crying 'humbug,' will not invalidate the fact of the existence of sin, or prove that institutions and associations for moral and religious treatment should not be established, and proclaimed throughout the world. So should physical vices, deformities, and defects, have reformatories for their relief, and these should also be proclaimed wherever physical suffering and deformity exist."

PLAIN, COMMON SENSE TALK.

Afflicted reader, do you want to be cured? If so, and your doubts and prejudices prevent your coming to the Institute, are you willing to investigate and see if your doubts and prejudices are well founded? Then do yourself and us the justice to state your objections in a frank and friendly manner, that we may put you in the way to see the truth, or give you faith, evidence, or explanation; and, if we are wrong, that we may know it, and be corrected. This we ask as a personal favor, and in justice to humanity.

If you could be at the Institute in person, with eyes and ears to investigate for yourself the marvelous cures which we perform, you would realize that half the truth has not been told. As a patient, you might say such cures look unreasonable and incredible. Carrying on an imaginary dialogue, such as often takes place between the consulting physician and patient arriving at the Institute, we answer:

This is not a valid objection, for thousands of scientific and mechanical triumphs seem quite as incurable, and yet, like these statements, are facts.

Patient—My doctors have tried, failed, and charged me for it, and tell me a cure is impossible.

Answer—They doubtless have done the best they could with what facilities they had. But if a thing is impossible to one without the means, it does not follow that it is impossible when ample means, experience, and appliances are at hand.

Patient—I have tried those who lied and deceived me, and took my money without benefit.

Answer—This we do not doubt, but you and I are not responsible for the crimes of others, nor do we like undeserved epithets or censure. If your home doctor was a quack, you ought to have known he had not the necessary experience or facilities.

Patient—I would like to obtain relief, and would try your treatment if I were sure of a cure.

Answer—You never can be cured unless you try; reward is only for those who make the effort and persevere, and you are certain of a cure here if it is possible anywhere.

Patient—The case is of too long standing; I am too bad to be cured, or to travel, and must suffer on.

Answer—That is simply deciding that you will not avail yourself of means which Providence has placed within your reach for regaining health and happiness. Hundreds whose cases were as bad or worse than yours, have been cured under our treatment, though condemned and abandoned as incurable under the old methods.

Patient—I have not the time or money now; besides it is too far for me to travel and I will wait.

Answer—Where there is a will there is a way, and human suffering demands privation, exertion, and immediate attention, while relief may be obtained.

Patient—It will cost too much and I can't afford it.

Answer—The man does not live who can not afford relief, while the cost is within his reach, and such cures never cost their value.

Patient—I have tried the doctors with much pain and expense, and repeated failure, and I am discouraged.

Answer—You know that your doctors have not the vast experience, and can not afford the multiplicity of machinery, appliances, and other facilities necessary to success. This is why

we have invested \$500,000 and over fourteen years' time to procure relief for such unfortunates. You have not failed under our treatment, and never will, if we undertake it, and your part is done.

Patient—I am afraid of danger, pain, death, or some bad results.

Answer—We take no dangerous risks or hopeless cases. Failures and disappointment of patients do not make reputation or profit us in any way. Our treatment is mild and humane—never injures the most delicate.

Patient—I know I ought to, but have neglected it from time to time.

Answer—Of all excuses, that of negligence and indifference is the most censurable and inhuman. Self-preservation and care for others are divine commands.

Patient—I will let some one else try it, and if they succeed I will go too.

Answer—Do you wait for others to obey civil laws or do their duty, to support their families or relieve their sufferings, before you attempt a like duty? Too often procrastination seals the doom of the sufferer with the stamp of incurability, or death claims him for his own. Besides, scarcely two cases are alike, and the result of one case is no guide for another.

Patient—Is the Institution responsible? Are the surgeons regular graduates, and successful?

Answer—The means of the Institute are ample, its credit unquestionable, the surgeons regular graduates, and have had longer and wider experience in the treatment of such cases than any others in America.

Patient—What are the charges, and how long must I stay?

Answer—We never fix a price until we examine the patient. They are never exorbitant, and are within the means of the poor. Most cases return home immediately, and complete the cure there, with appliances and treatment furnished by the Institute.

Patient—Do you treat all diseases?

Answer—No, we do not; nor do we believe a doctor lives who excels in all branches; for it is impossible, in the brief term of human existence, that one man should grasp all the details of the healing art and become proficient. Concentration of time, thought and money are requisite to success.

Patient—Why can this Institution cure cases that doctors can not?

Answer—Because we have had over fourteen years' experience in the treatment of such cases, and every thing that money, genius or science can afford, with a staff of over fifty surgeons, instrument makers and assistants, constantly devoted to one specialty. It is absurd and false for physicians to deny that practice makes perfect; and we do excel all who do not make it a special business.

Patient—Why do some physicians object to the Institution, and to invalids patronizing it?

Answer—The large majority do not—honest ones never do; for if they have not visited it, they know nothing of the facts, and if they have, they will recommend it. Some object to our advertising, but the intelligent business world laughs at these antiquated whims and prejudices, and points to every other noble enterprise or business that is advertised in some way. Again, they fear the loss of bread and butter, or reputation, though they advise you under a garb of disinterested friendship.

Patient—It is said by some that you charge unreasonable fees for your services.

Answer—We do want a just remuneration for a cure, and no more. We have to live and pay our expenses; to this, no reasonable person can object. Please, while you are cautioned by your doctor, see if he has not charged you or others for failure to cure, and ask yourself if such advice is for your relief.

Patient—Can't our doctors operate or send for apparatus just as well?

Answer—Yes; if you wish to prolong suffering by trying experiments, or to realize the sad failure of a hopeless operation. Does reading works on agriculture make a farmer, or a work on engineering a surveyor? Or does it not take daily experience to insure skill and success? To send a measure for apparatus is downright cruelty—swindling the pocket and torturing the patient. You might as well have him measure your mouth and send for a set of artificial teeth, expecting a fit or satisfaction. All apparatus must be perfectly fitted to the patient, requiring many changes in shape and form, which must be done at the Institute, under the charge of experienced surgeons.

The foregoing is a specimen of hundreds of interviews held with invalids who come to the Institute in person, or who seek for information by letter. Many of them have suffered long years, and are wearied with pain and failure, suspicious of the whole science of medicine, and almost hopeless of any escape from suffering, except in death. Many, also, have been prejudiced against the Institute by interested parties, often times, sad to say, by the very physicians who should be their best and truest advisers. It is equally a duty and a pleasure for us to disabuse the minds of invalids making such inquiries, to show them the great advantages of the Institute, wherein its methods of treatment excel all others, and why we are able to effect cures where every other means have failed. We make no concealment of our methods or appliances; but, on the contrary, court the greatest publicity, knowing that our enterprise is as meritorious as it is humane.

Having answered all the questions and objections of the invalid, we may be permitted to ask one or two. Is it possible for any institution to be patronized as this has been for twelve years past with such an overwhelming business, its patients increasing faster than its accommodations, unless it was worthy of confidence? Would the best, the most honest, intelligent, and trustworthy men of the country lend their names to it continually if it were a fraud or a swindle? This Institute is the largest of the kind in America, does a more extensive business, and has better appliances than any similar institution in the world, and is endorsed by the best men of the city and state where it is located, and by thousands who have received its benefits. Do not these facts furnish conclusive evidence of its merit and efficiency, or will you listen instead to the interested sneers of your home doctor, who never has done and never can do you any permanent good, and to the false advice of those who know absolutely nothing of the facilities or the treatment of the NATIONAL SURGICAL INSTITUTE?

CHAPTER V.

RECEPTION OF PATIENTS — FIRST IMPRESSIONS — CAREFUL EXAMINATION OF CASES — CANDID HOPE FOR THE AFFLICTED — FAILURES — DUTIES REQUIRED OF PATIENTS.

IT is natural that invalids—who are apt to be very sensitive, and sometimes even timid, in regard to their treatment—should desire to know something about the internal management of the NATIONAL SURGICAL INSTITUTE, and if they have decided to visit it for treatment, what sort of reception they will meet with. To gratify this desire the following information is given—premising, beforehand, that the law of kindness prevails in every department:

On arriving at the Institute, or either of its branches, each patient is shown by the usher into the Reception Room, where he awaits the examination of the throng preceding him. It is well to mention that the ordeal of waiting for his turn may be very tedious to the new comer, unaccustomed to Institutions of such magnitude, but it is a necessity of the situation.

The patient will no doubt experience the greatest surprise of his life in beholding the number of crippled, deformed, and helpless persons, under treatment at the Institute. It is not amiss to say that the average number of patients is not not less than fifteen hundred. These are not all at the Institute at one time, as those who are supplied with needed apparatus and other facilities, and are making satisfactory progress, are at their homes. Another important fact is likewise to be borne in mind by the newly arrived patient: cured or benefited patients do not remain long in the Institute. Hence, the majority that meet the eye have either just arrived or are under process of cure. But, even among these, the evidence of relief is all that can be asked by the most incredulous. The words of praise and gratitude from the conscientious and faithful patients who are improving in health, and regaining the use of long useless limbs, are the best testimonials of skill that could be given.

CAREFUL EXAMINATION.

When his turn arrives, the patient is conducted to the Surgeon's Room for examination. Here a careful diagnosis is made of his particular ailment, including peculiarities of constitution, temperament, &c. If his case is considered

INCURABLE,

He is at once notified of the fact and discharged without cost, as it is not in the province of the Institute to undertake cases which can not be benefited, or at least partially relieved from pain or deformity. In this connection, many sad scenes occur. Numbers of those who come to the Institute for treatment have been for a long time under the care of unskillful physicians, without any appliances for proper treatment, and have thus wasted years of valuable time. After losing all hope, and when in many cases it is too late to obtain any relief or benefit, the patient comes to the Institute. One of the most painful duties that we have to perform is that of breaking the sad truth to such a patient, that he is a hopeless cripple for life, and that the Institution can do nothing for him.

But if the case is curable, the patient is directed to the Secretary, whose business it is to record the name of the patient and all the important particulars connected with the case.

The cost of treatment, for the course required, is also here considered, and such charges as are equitable and just, are satisfactorily arranged. We are often asked, by letter, the cost of apparatus and treatment. We reply that our charges are reasonable, and no exorbitant prices are ever demanded. Our treatment is more expensive to us than the usual treatment employed by other physicians is to them; yet the charges made by us are often less than the fees charged by others for operation and advice alone. We should be glad to inform every patient, before he leaves home, just what the apparatus and treatment will cost; but until we know, from a personal examination, the condition and wants of a case, with the kind and number of appliances needed, or the operation or treatment necessary to relieve and restore, we can not say what the expense will be. No one need hesitate or stay away on this account, as every case received by

us for treatment is at a price that is mutually satisfactory. When this is done, if the case requires apparatus, the patient is conducted into the Apparatus Room, where measures are taken for the required appliances.

Thence the patient is shown to the Prescription Department, where the necessary medicines are compounded, dispensed, and proper directions are given.

Afterwards, the patient is taken to the Treatment and Bath Rooms, according to the direction of the Surgeon.

Withal, the patient must bear in mind that all can not be waited upon or served at once. As soon as possible, the necessary appliances will be made and fitted, and the requisite prescription will be filled.

It should also be remembered, that in all cases where the apparatus can be properly adjusted, and there is a certainty of the treatment being faithfully carried out, the patient is permitted to return home. Under no other circumstances would the managers of the Institute feel themselves justified in granting the privilege, for the reputation of the Institute and the welfare of the patient are equally involved in the success of our treatment. Experience has taught us that much depends on the faithful and conscientious co-operation of the patient, his strict obedience to orders, and an intelligent use of our appliances. It is only in cases, therefore, where we feel we can implicitly rely on patients for such co-operation, that we permit them to return home and undertake to treat them there. Happily, however, there is a very large number of such cases, and it is a pleasure for us to be able to inform such patients that they can be treated at home as well as at the Institute.

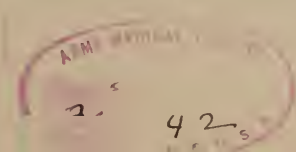
FAILURES:

Or Some Account of the Cases which Fail to Obtain Relief at the Surgical Institute.

It may be asked by some of our readers, "Do all persons who apply to the SURGICAL INSTITUTE and who are received under treatment, get cured or obtain permanent relief?"

We answer, "No," and beg leave to call the attention of our readers to the following important considerations:

All intelligent and discriminating minds must readily perceive that, out of THIRTY THOUSAND cases which have been treated at



the SURGICAL INSTITUTE, there would be some fickle, frivolous, fretful, impatient and unmanageable patients. There are some who are so unwise as to soon consider their own judgment better than that of the physicians in charge; some are unwilling to expend the means necessary to visit the Institute as often as required, and others are, unfortunately, too poor. Hence, the necessary changes of the appliances used, the instructions for wearing them, and other essentials of successful treatment, are not complied with. Very many patients are disheartened by meddlesome friends, and some, having never learned or realized the truth of the old adage that only "fools and children judge of work half done," give way to dissatisfaction before the treatment is fairly begun, thus inducing negligence and failure.

Some persons, again, expect almost miraculous cures in a limited space of time. If the cure is not apparent to them at once, and weeks or months pass by without visible improvement (to them), they lose courage and hope, and hastily conclude that the old story of disappointment is again to be realized. In this connection, we would say, for the benefit of all the patients who have been, or may come to the SURGICAL INSTITUTE, that nearly all the cases which come under our care are of a chronic nature. We repeat these facts. The majority of our patients have been treated *without success by their physicians at home*. Discouraged and doubtful of relief, they are nevertheless irresistibly impelled to come to the SURGICAL INSTITUTE by reason of the many cures which are performed here. The hope of relief on coming here is still overshadowed by the disappointments of the past; and, with the suspicions and doubts which, in addition, may be instilled into their minds by thoughtless or envious persons, it is not surprising patients should be too quick to conclude that they are deriving no benefit from the treatment, and despair of relief. Such persons should consider that if their maladies had not been serious and obstinate, their physicians at home might have effected a cure. They should bear in mind that our principal object in founding and sustaining the SURGICAL INSTITUTE is to afford the relief and remedies from life-long suffering and deformity which *can not be obtained at home*.

It must also be remembered that, after the system has once been shattered by disease, and the "human form divine" has

been distorted by long continued deformity, the restoration to health and bodily perfection must necessarily be slow.

If all cases could be remedied by surgical operations, the cure would be speedy and satisfactory. By the skillful touch of the instrument, the most shapeless, disfigured, and mutilated face is transformed to its normal outlines, or, at least, to an appearance of comeliness. The painful, loathsome tumor, sapping the vitality from the system, can be at once removed, &c., &c.

But the cure of *deep seated disease* and *long continued deformity* is a different process; and requires as much skill on the part of the operator, as patience and obedience on the part of the patient.

THE DUTY OF PATIENTS.

Few patients realize that they have as important a part to perform in the process of cure as the physicians of the Institute. This is true; and the following points should be strictly observed by all patients seeking relief at our hands:

First. To come immediately to the SURGICAL INSTITUTE, and examine for yourselves whether the statements made in regard to it are true or false. If it is impossible for you to come, investigate statements in regard to it by every means in your power.

Second. When you become satisfied of the correctness of the statements in regard to the SURGICAL INSTITUTE, and conclude to place yourselves under our charge for treatment, bear it implicitly in mind, that a strict compliance on your part, with all our directions and instructions, is absolutely necessary to your improvement and cure. No other course will do justice to yourselves and the Institute.

Third. Do not fail to consider the importance of remaining at the SURGICAL INSTITUTE as long, or visiting it as often as is necessary to promote a cure. Some delay and expense may be involved; but what, to you, is the value of a few dollars and any amount of time in comparison with restoration to health and bodily perfection?

Fourth. We always aim to make traveling and boarding expenses as light as possible to the patient; feeling assured on the one hand that no one will want to barter with health and life as

with property, and, on the other, that no one will hesitate to expend a reasonable amount of time and money to obtain relief.

In fine, we desire that every patient not in the Institute, should inform us weekly of his or her condition and necessities. Every case, with its full history, is duly recorded on our books. A record is likewise kept of every prescription given and apparatus applied, which at all times enables the physicians to prescribe and give directions according to the necessities of the case. Sometimes there are annoying delays in receiving prescriptions and apparatus by mail and express, which all reasonable people will understand and make allowance for. This frequent and grievous source of trouble arises chiefly from omissions and mistakes on the part of patients, in their letters. Many fail to sign their names; some omit their post office or express office address; others direct to a particular surgeon, and use wrong initials, and the letters are never received. Braces are often returned for repair, with nothing to show where they belong. Letters are received, informing us that shoes have been sent to us to be attached to braces, but the shoes come unmarked, and we can not possibly indentify them. Always mark your name, and directions for returning, on apparatus, shoes, or any thing else you send to the Institute. Letters may miscarry, even when properly addressed. In cases where prompt attention is not paid to his requests, the patient may feel neglected. But every letter received by us, having name and address, is immediately answered; and every order for medicine, apparatus or repairs, if correct, is promptly filled, and the patient notified how and where it has been sent.

HOW TO WRITE.

Give your name, (and, if under age, the name of parent or guardian who placed you under treatment), post office, express office, and State; also state your disease or affliction, present condition, and the condition of apparatus, fully; also, action of medicines, whether you are improving or not, and say candidly if you are complying strictly with all directions, or if some things are not neglected. Your own welfare demands this, that necessary changes of treatment may be made; and if you have not done as directed, do not attempt to deceive us, as we might

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indulgences, and straying farther and farther from the simplicity of nature. Thus they are constantly opening up new paths in which indulgence may cross natural laws. The multiplicity of means of enjoyment counteracts the force of greater intelligence in exposing the evils of excess or abuse. Men will sin while it is pleasant, and only think of the penalty when it comes. The more numerous the opportunities and incitements to sin are, the more frequent are the sufferings that reproach and punish it. Is it impossible, then, that mental and physical development should go together? As we know more, should we suffer more? As we improve the means of correcting disease, should we increase the liability to incur disease? By no means. This would be a hasty conclusion from an imperfect generalization, as unphilosophical as it is false.

We know that many men of the most cultivated minds and greatest attainments are as perfect in physical as in mental development. What man has done, man may do; and if "a sound mind in a sound body" be possible in one case, or a dozen cases, it is possible in more, and there need be no limit. The safe conclusion is, that we do not, in the higher order of life, properly balance mental with bodily education. We do not give too much attention to the former, but we do not give enough to the latter. Undoubtedly it is the duty of doctors to enforce the lesson of observance of the laws of health and physical development, but doctors can not go about giving lectures on diet, irregular habits and vicious pleasures. Not unfrequently the disease comes of the sins of progenitors; for the language of the Bible is strictly true that "the sins of the fathers may be visited on the children." Not unfrequently, too, the operation of the laws of health is so hidden or uncertain, that it may be difficult to determine where and to what extent they have been broken. Doctors give directions in individual cases, but their efforts to enlighten the public on questions of hygiene and the proper observance of health laws, have not been crowned with signal success. It is far better to enforce the necessity of prevention rather than cure. If this received half the attention and study that is devoted to the subordinate one of cures and remedies, the world would be infinitely better off. Disease is the penalty exacted by nature for the violation of her laws; and, like most penalties, it is not

always in proportion to the offender's notion of the magnitude of the offense. What he thinks a slight transgression, may be punished with a severity much in excess of his sense of culpability. And a gross violation may not, in all cases, be followed with equal suffering. Therefore, there can be no more silly conduct than trying to sin safely. It is as silly as pulling the trigger of a gun easily, to send the bullet out gently. The duty of men of sense, to themselves, to their families, and to the community, is to study not to transgress at all. The forms of error, in this regard, are almost innumerable. The abuse of bodily functions and powers by excess, and their abuse by perverted or inadequate use or neglect, constitute the two chief classes of transgression. A man who eats too much, may suffer from indigestion; but he may suffer equally from not eating enough. If he exerts any limb or organ too much, he impairs its strength and usefulness; but he also impairs it by not using it enough, and still more by neglecting its use entirely. We retain possession, in the highest degree, of our faculties and powers, only by their judicious, regular use. The great rule is moderation, equally in use and the opposite—vices, of course, being out of the case. The time to preserve health is while it is ours, and not when we begin to feel that we are losing it. It is an experience as old as the world, yet every generation has to learn it anew, that "we never know the value of what we have, till we have lost it;" and of health, the most valuable of all nature's endowments, this is especially true.

The sick man measures no wealth or effort against recovery, but how little does the well man seem to care to keep what the other is so eager to regain. He trifles with it, risks it, and finally, when he least expects it, finds it slipping away from him, and sees what a fool he has been. Better, then, take the lesson of universal experience, and study to preserve health while we have it, and make sure of the best legacy to our children, in the sound constitutions which are among the surest gifts of sound parentage. This, alone, should be a sufficient incentive to heed the inculcations of experience and science, in observance of the rules necessary to the preservation of the health. No trait or quality is more certain of transmission to children than bodily vigor and integrity, and the man who would not take the trouble

to study his own physical well being, in order to secure that of his children, is unworthy to be a parent.

The duty of preventing deformity and disease is as important as that of preserving the health. The burden of this work falls largely upon parents and teachers and we therefore make the appeal directly to them, in the full hope of securing their hearty co-operation.

Our lives have been devoted to the relief of human suffering and deformity; and, hearing the constant wail and cry for help, from suffering fellow-creatures from every nook and corner of the land, and knowing that no adequate means of relief can ever be extended—that the great tide of human woe is rolling onward, and that nothing can mitigate or abate its fury but to exhaust its fountain—we make this appeal to parents as the source of humanity's brightest hopes. While you stand as beacon lights to the young, and as their pilots to guide them on the rugged waves into the haven of knowledge, you must also stand as the guide and guardian of their physical safety. Ignorance and disobedience of nature's laws are the source of nine-tenths of human suffering, deformity and premature death; and while parental love and care would seem ample to vouchsafe to the young hygienic culture, good constitutions and health, they often fail most lamentably.

The child makes that love a means to extort from better judgment, permission for pernicious indulgence; besides, thousands of thoughtless and ignorant parents bring new responsibilities upon themselves and the world, as though chance, or animal life, without intelligent guidance, would suffice,—unconscious of, or ignoring the higher destinies or possibilities of a human being. Great opportunities lie before you; the aggregate good you may do, and the suffering you may avert, eternity alone can tell. If you would wring body and soul from Satan's grasp, and the rack of physical torture, and lead them to higher enjoyments; if you would give your children good constitutions as a firm foundation and frame work in which to develop, protect and render useful the intricate mental machinery, do not neglect this great opportunity.

Too few school teachers realize that they are the Lord's and humanity's great shepherds and nurserymen: that they, too,

have power, like the potter over the clay, to make vessels to honor and to dishonor, fitted for wrath or the joys of heaven. You are sewing the seeds for future harvest, and you should sow what you will not be ashamed to reap. No higher mission is allotted to man than to shape the destiny of his fellows. Do not think it a servile task. High heaven and humanity smile upon you; intelligence, social happiness, and the unfolding of the powers and joys of the human soul, are the rewards of your labor; and as we would plead in behalf of the downcast, the suffering and deformed, we ask you to give your hearty co-operation to the work of alleviating and diminishing human woe. We all have a mission on earth, whose reward is above. *Will you help?*

A very important question has ever been: What should a child first study, and how should an education be commenced? In answer to this, we have one suggestion. Before Geography, Arithmetic, English Grammar, History, or any of the sciences, teach the child Anatomy and Physiology. This study, with every human being, should come next to the Bible. First care for the soul, then for the body. First learn God's attributes—care, love and mercy to us—then learn our obligations to Him and *ourselves*.

No one for a moment doubts the necessity of a sound, vigorous body to usefulness or enjoyment in life; nor does any one deny the fact that a knowledge of our bodies and the laws of health is indispensable. All admit that a brilliant mind in a decaying or feeble body is a failure; that the body, like the mind, is susceptible of development, and its imperfections may be removed. But when is this work to begin? As early as possible. Make it the first study, that it may be practiced in the most important period of life. The constitution is made or lost during the development of the body. You say there are so many hard terms. Are they harder than the fearful geographical names; are they harder to understand than the seemingly arbitrary rules of language, or the intricate rules of mathematics? Is it not as easy, instead of teaching them the products and peculiarities of different countries and nations, to teach the use and peculiarities of our different organs? While they should learn of commerce and of commercial centers, of its great avenues and their utility; tell them also of the heart as the great center of distribution to our

system, and of the arteries as the great avenues or thoroughfares, laden with all the freight, labeled and destined to the innumerable stations, and delivered for the manufacture of muscle, bone, ligaments, skin, hair, nails, nerves, blood vessels, fat, etc., etc., and that at each of these stations worn out particles are taken instead, and by the veins are brought back to be expelled by the great chemical laboratory and furnace—the lungs and liver. Instead of other mathematical problems, teach them the ever and incessant power and pulsations of the heart, which, like the water-works of a mighty city, drives the fluid through many miles of pipes in our bodies to water our whole system, expending a force of thousands of pounds per day. Teach them that the grandest telegraphic system in the universe, with its centre in the brain, and its millions of sentinels and operators, relays, etc., as far transcending the master-piece of a Morse or a Field as Jehovah does poor fallen men. In every bone, muscle or tissue, interest and instruction are found if properly studied; and even the smallest child can be taught in a simple manner and with interest to them, all the important facts in Anatomy or Physiology and the laws of health.

While you would tell them of icebergs, of polar seas, snow-capped mountains, and that our lakes and rivers are useless for navigation during the cold season—teach them also that cold extremities interrupt the flow of the vital fluid through the many little rivulets and streams within them, thus forcing the blood in undue quantities upon the lungs, brain, spine or other organs, from which sickness and death may follow.

Teach them that the inhalation of plenty of pure air is as important to give action and power as steam is to the engine, and that all the organs of respiration should be ample, free and unimpeded in their action. That, as food supplies the waste of the system it is also fuel; it must be oxidized, that heat can not be generated in the system without any ample supply of air, any more than fire will burn without it. That those who compress the chest with corset or clothing, and limit the amount of air inhaled, have cold hands and feet, poor blood, feeble circulation, and soon die.

While they are exercising in gymnastics, they should be taught practical Anatomy and Physiology; whenever a motion

is made, let them know what bones are moved and what muscles do it. By combining the study with the practice, facts are riveted upon the mind never to be forgotten.

This knowledge of oneself, under the guidance of parent and teacher, may be so systematized, simplified, and imparted to the young, that they may easily conform to nature's laws, and readily comprehend their duties to "God, their neighbor and themselves." Food, clothing, ventilation, hours of study, exercise, sleep, *self-control*, and social duties, are all important elements in such an education. Sweetmeats, rich and highly seasoned food, containing a super-abundance of carbon or heat producing principle, should be excluded; while food containing nitrogen and phosphorus—muscle and brain-producing elements—should take their places. Stimulants of every description—tea, coffee, tobacco, spirituous liquors, and opium in all forms and in every guise—should be forever banished from presence and sight.

Every line and every sentence of that most wonderful of all prayers is fraught with interest; yet the simple words, "lead us not into temptation," have an importance and significance which can not be over-estimated. There can be no compromise, no half-way ground. Stimulants and narcotics of every kind should be excluded from all grades and classes of society. Make them disreputable and unfashionable, and if those already enslaved have no hope of deliverance, see to it that coming generations are protected and saved.

Paul lays down a golden rule when he says, "Flee youthful lusts." Here the whole class of lewd and libidinous evils are forbidden. Moral and hygienic laws both say, flee these lusts, if you would have purity, health and happiness. Transgressors at this point are numerous. Let the pure be pure still, and let sinners believe, obey and reform. "Live soberly, righteously and godly," is one of the most comprehensive laws of health.

Holy Writ declares we are "fearfully and wonderfully made," and he who early has unfolded to him the truths of his own existence—viewing the image of God, the masterpiece of His creative power—exalting his own conceptions of Deity and self, and placing in his hands the chart and compass to guide him from shipwrecks, will be saved untold bodily suffering through life, and be able to prolong it to its fullest period.

CHAPTER VII.

DEFORMITIES.

MAN was created in the image of God, and when he came from the hands of his Maker was perfect. Every feature reflected the divine attribute of perfection, every organ performed its function with absolute precision, and every bone and muscle were faultless. Had this pristine condition of man continued, deformities and afflictions would be unknown; but with sin and the sentence of death, came disease and deformity. In reality, any deviation from perfect physical manhood is deformity. Yet from long abuse, maltreatment, excess and debauch, the human form has been so changed, that to find, in the present day, an approximation to the original type, is indeed gratifying, and now only very grave deviations are called deformities. Yet the most lamentable structures, "bandy legs" and "spindle shanks," and all variations in figure, from the angular, bony frame to the *embonpoint* of obesity, are found to exist.

Thousands of crooked backs, round shoulders, hollow or pointed chests, and crooked necks throng our thoroughfares, covered from the popular gaze by ingenious clothing. So great was the difficulty experienced by Powers, in his production of the Greek Slave, that, 'tis said, many different models from the finest living specimens were selected and used in fashioning the various parts of the statue; and, to make it complete, he was obliged, after all, to refer to the old specimens of art for a perfect model. From a retrospect of the past, whether we gather from the voice of traditionary lore, from written history, mythology, or the old art treasures, we are pointed back to ages past, when sin and suffering were less prevalent, when life was longer, and the body more beautiful and symmetrical than now. They also proclaim man's degeneration. To make even brief reference to all the varied deformities to which the human body is subject, or their causes, can not now, with our limited time and space, be attempted.

Innumerable causes for deformities have been assigned, each

sufferer having his or her own explanation, which is generally erroneous and unsatisfactory. A large number of cases result from injuries and diseases of the joints; very many are the sequels of paralysis, some of the muscles having made a partial or complete recovery, while their antagonists remain powerless and inactive. In this way constant flexion of the joint is kept up, until it becomes fixed and motionless. Rheumatism is a fruitful source of deformity.

A very large class of malformations and monstrosities are congenital; as crooked feet, hands, legs, and arms, hair lip, cleft palate, web fingers and toes, *spina bifida*, tumors, marks, deficient members or parts, &c., &c. In accounting for these freaks of nature, the parents or sufferers too often leave disease and disobedience of physical laws out of the question, and attribute them to maternal frights, unsatisfied longings, and other foolish and imaginary causes. Through ignorance and superstition, the fear of witches, hobgoblins, and ghosts, like a fiend, has followed mankind from the dark ages of mental depravity to the noon day of light and knowledge, making them miserable and unhappy. Thousands of mothers, even in the present enlightened age, are tortured by false and silly traditions, while many physicians, through apathy or taint of superstition, fail to denounce the lie. It is a sad thought, that in the light of the nineteenth century this monster, superstition, should have its fangs so deeply rooted in so many mothers' hearts; yet strange and sad as it is, to assail it and try to convince mothers of its falsity, only arouses a fierce combat in its defense, and the "old believer" is astounded by your audacity. Quick as the lightning flash she scans the field of her past life, and marshals a host of red blotches, cherry spots, hairy moles, representing rats or other animals—in fact, a menagerie of snakes, monkeys, elephants, and domestic animals, is summoned in defense of her views. These marks, or *næva*, it is thought by many, result from the thoughtless or careless gaze of the mother, during her pregnancy, upon some improper or hideous object, some deformed or mutilated human being, or his picture, when by some mysterious power, and for some purpose, devilish or divine, the impress is carried from the eyes of the mother down through the body, in some unknown way, to the unborn child, and branded there as with a hot iron; or, under a like influence,

it may twist and distort its hands, feet or other parts, and play pandemonium generally. Lycurgus, one of the wisest men of ancient times, was fully persuaded of the truth of this marking theory, and because there was in his day no cure for the maimed, disfigured, or deformed, he ordered an examination of every new born child, and if a blemish appeared it was to be killed at once, that it might not meet the gaze of those who were about to become mothers.

Witches were hung in Massachusetts, and only last year in Mexico! How an expectant mother, with this ancient, solemn lie impressed upon her mind, trembles and cowers, like an escaped criminal, fearing that she may want, see, hear, smell, or taste something that will injure or ruin her unborn child. Jacob's experience and triumph with Laban, are cited as biblical evidence touching this mode of producing monstrosities, and it is claimed that the ringed, streaked and striped sticks, by some incomprehensible process, imprinted these streaks and stripes upon the unborn calves!

Since we find no account in the Bible of the women of that day suffering from these causes, is it not ridiculous for the women of the present day to attempt to imitate Jacob's cattle? If it was not a miracle of the Almighty to favor Jacob and convince his idolatrous uncle, why do we not to-day see the same results? If it was from natural causes, as fright of the cow, was it not wicked in Jacob to deceive and swindle his father-in-law? It was as much God's plan and work, as was his choice of Jacob before he was born; or the ladder and the angels which Jacob saw on his way to Mesopotamia; or the angel with which he wrestled

NOTE.—If it is true that the mere sight of the deformed reproduces like afflictions, what a multitude each cripple must produce like himself, and how sad the train of cumulative misery each must send drifting along the stream of time, ending only with the extinction of the race. Better, far, even in this age, to follow the example of Lycurgus, and kill the cripples, than to permit them thus to maim so many thousands of innocent beings. What superstition! If we believe the origin of monstrosities depend upon such causes, this alone would be sufficient incentive to spend our lives in the cure of such cases, and no conscientious person, entertaining this belief, could for a moment hesitate to bring, or send them to the INSTITUTE for treatment, thus saving untold misery to generations yet unborn. In this view the SURGICAL INSTITUTE could justly lay claim to the accomplishment of the grandest work on earth.

on his return. Such effects are not produced by external objects, frights, or desires, on man or beast, any more than a rod can by like means be turned into a serpent; or a rock to be made to pour forth torrents of water; or rivers run with blood; or seas and rivers open for retreating armies to pass through, then close to engulf their pursuing foes. Such miracles were for specific times and purposes. The Bible, of all books, is the last to which we should appeal in proof of such absurdities. The Lord never intended to rest the perpetuity of our race upon so uncertain and capricious a foundation, by which the least desire or fright might malform, piece by piece, the human body, and by reproduction in kind, end the whole race in monstrosities, incongruous and unrecognizable by God or man.

Yet we find people planting crops in certain phases of the moon; and observing the signs of the Zodiac for suitable times to wean babies and calves.

Some use the horse shoe as a protection to their homes; others believe in dreams. Some think they have held communion with spirit messengers from heaven. Some believe a tale because it is old, and has long been cherished. Paganism is old; mythology is old; idolatry of many kinds is old; so are ignorance and superstition. The superstition of which we are speaking is ancient and almost universal; yet it has not the slightest foundation in reason, truth or science. All monstrosities, all deformities and malformations, all extraordinary marks are the result of natural laws, or rather of the violation of some natural law. Nature, a stern but faithful mentor, teaches us the penalty of violating her laws, and warns us that the iniquities of the parents shall be visited upon the children to the third and fourth generation. It warns us against all kinds of vice and debauch, which to-day is producing all this marking and deformity. We should recognize these as the sequel of our wrongs, instead of shielding ourselves by some vague superstition. Did space permit, we should love to give an exposition of this cloud of remaining ignorance, if by so doing, in upholding the truth, the fears and painful forebodings of those whose trials are already too grievous to be borne, could be mitigated or dispelled; but we must forego this for the present. You then may ask, how do you account for all these so called marks and deformities?

We might answer by asking what causes knots and marks on trees, or why are some crooked? What makes a Negro black, a Mongolian yellow, or an Indian red? What causes tumors, or why do cancers torture us? In fact, what causes nearly all our suffering and misery?

Is it not in some instances, but Nature repeating herself—like producing like—even reproducing from the fourth generation past, from seeds then sown and waiting to be loosed from some constraining influence, and for favorable soil or system for development. “As ye sow, so shall ye reap. If in corruption, you shall reap in corruption.” This is true in a physical sense as well as spiritual. Now if we could only see ourselves as our Maker sees us, and behold the heinous crimes we commit against ourselves, and the daily torture we bring upon ourselves by violated physical law, all your questions as to cause would be answered. Were we to stand, as a sentinel or spy, and see what passes into the stomach of man, instead of simple, nutritious diet and water, to sustain life without tax upon the organ, we would behold, as it were, a caravan from all nations and climes, laden with a conglomeration of innumerable articles, incompatible and villainous, with all manner of compounds, mixtures and concoctions; and this indigestible stuff, some boiling hot, some cold as ice, containing a dozen oils, acids, and alkalies, stimulants, narcotics and poisons, all goes into the revolting stomach, because fashion or perverted taste commands obedience. And now, from this a sound body is expected, free from spot or blemish. Add to this, injurious clothing, exposure, dissipation, turning night into day and day into night, and is it not marvelous that a perfect child should be born of parents whose bodies have been so outrageously treated. With dangerous pressure by foolish mothers, with poor blood, the germs of scrofula, syphilis, consumption, erysipelas, and other poisons in its composition, it is strange that some of the minute cells, so mysteriously and wisely arranged in line to make vessels, should occasionally be defective or disarranged, and thus either arrest the development of a blood vessel, and, as a consequence, stop all growth beyond, preventing the formation of a foot, hand, toe, or some other member; or as the development is from both sides of the body, when the vessels fail to meet and unite in the median line, that cleft palate or hare-lip is

is the result? The bursting of a vessel may be caused by these diseased or defective little cells; and by enlargement of the capillaries, a red spot or wart is formed on the skin; or the position of the child, under the unnatural pressure of a corset, may be such as to allow one set of muscles to contract, while the opposing set is prevented from doing so by the pressure, and thus a crooked foot or a crooked limb is formed. Actual disease may produce much and serious trouble in this direction.

There can be no doubt that before birth the child may be influenced by the condition of the mother's health, and that abnormal nutrition, in various parts, occurs. In some it is excessive; in others diminished or entirely suspended. Diseases of the small blood vessels may cause their rupture, and thus give rise to marks and spots. In fact, none of these phenomena are as inexplicable as the finding of hair in the ovaries, or teeth in the bladder, or half a bushel of hair balls, large and small, in the stomach of a cow. As yet, the explanation of many things is hard; but to implore astrology, witchcraft, or foolish legends for their solution is absurd; for though they may be hidden from us, they have, nevertheless, been produced by natural causes.

It is strenuously claimed that the marks adduced in evidence bear a strict resemblance to the article longed for, or at which the fright was taken. Now, if this is not true, why attribute it to such causes? If it is true, why is it that when the object of a mother's longing is a new dress, the child is not marked with a dress; or if green peas, why do we not find a green mark; or if she be frightened at a locomotive, why not have the child a genuine, diminutive locomotive; or if the fright be from the firing of a cannon, or the explosion of a boiler—very impressive things—why are they not correctly represented? Mothers, let us tell you, it is all false; there is not a word of truth in it, no matter what may be said to the contrary. That idiotic or insane parents may expect similar children is true, and that scrofula, consumption, syphilis, and other constitutional diseases are transmissible is also true, for this is in conformity to the law that like begets like, whether good or bad; hence, the necessity and importance of cherishing health and obeying its laws, for it is not alone parents who suffer the penalties of violation, but thousands yet unborn must suffer for the sins of their ancestors.

In this connection we will mention a sad and striking fact, viz: That physical degeneracy is in nearly the same ratio, and goes hand in hand with civilization and knowledge. As man emerges from barbarism, and advances to high civilization and mental power, physical deformity and suffering are his ghostly companions. The abject servitude of slaves to their masters, or of woman in heathen lands to her liege lord, produces far less physical injury than the negligence and debauch of the civilized and intelligent, together with the systematic violation of the laws of health, practiced among educated people.

With our knowledge of physiology, chemistry, and the laws of health, were we to work as zealously in regenerating the physical, as Plato did in regenerating the moral man, we could lay broad and deep the foundation upon which the finest and most cultivated organization might rest, and we could mitigate human deformity and woe. Then should we see the noblest monument that could possibly be reared to art, science, civilization, and religion—a perfect man.

One thing seems very plain upon examination, and that is, the nearer we approach the animal creation, where simple diet and habits prevail, the closer is the approach to the original symmetry; and the farther we ascend the scale of mental culture and brain development, the more malformations, paralysis, and nervous diseases increase. This is not necessarily so. Our vanity and intellectual pride sometimes soar above the groveling clay, and revel in fancy free, until the neglected or abused body calls home its counterpart to rejoin the suffering endured. We look upon the body as subordinate in importance, instead of being the very bulwark, as it really is. Its development is regarded as of minor consequence. Its necessities are neglected, its rights infringed upon, its demands are unheeded. It is coerced by fashion into submission to all manner of indignities. Food, clothing, sleep, and exercise are all perverted. Is it strange that disasters follow?

When we examine into the condition of the barbarous and uncivilized portion of our race, we find them comparatively free from the physical alterations and defects that afflict us. Take, for instance, the African race in its purity. Where do you find among these people a club-foot, cross-eye, hare-lip, cleft-palate,

spina bifida, or infantile paralysis? The same fact will be found if we examine the Indian tribes. With none of them do we find the well marked temperaments that distinguish the Anglo-Saxon race. Instead of the well marked nervous, lymphatic, sanguine and bilious temperaments, we find a great uniformity in personal appearance, disposition and habits. Even in our Southern States, where comparatively few full-blooded Negroes are to be found, deformities are rare and temperaments uniform. The truth is, that, as far back as authentic history will carry us, we find that as the mind is cultivated, the laws of nature and of health are violated.

That deformities are rapidly increasing, is apparent to the most casual observer. The distortions and deformities resulting from paralysis alone are fearful in their numbers. The effects of deformity upon the suffering subjects have ever been distressing and baneful. The most ancient of historians sadly pictures the fate of those who, by birth or accident, were deformed. See the following in Leviticus, xxi., 17, 20: "Speak unto Aaron, saying, whosoever he be of thy seed, in their generations, that hath a blemish, let him not approach to offer the bread of his God. For whatsoever man he be that hath a blemish, he shall not approach: a blind man, or a lame man, or he that hath a flat nose, or any thing superfluous; or a man that is broken-footed [club-footed], or broken-handed, or crook-backed, or a dwarf," &c. If mankind had always exercised the same generosity to cripples that King David did, their lot would have been less gloomy. He took Mephibosheth, Jonathan's son, who, at the age of five years, became crippled in both feet from a fall, when he and his nurse were fleeing, after hearing of Saul's defeat (it was doubtless from paraplegia, as both feet were lame), and bestowed many and large favors upon him. David, having sent for and brought him to his palace, gave him large possessions, and commanded that he should, thereafter, eat at the King's table. Alexander the Great had wry neck. Socrates, Æsop, Lord Burleigh, Sir Walter Scott, and Lord Byron, it is said, were deformed, more or less. Their transcendent genius, however, spread a mantle of tolerance over them.

The visitation of deformity, whether from disease or some freak of nature, played upon these victims, making them different from

their fellows, is sad indeed; and though, as often happens, to make amends, as it were, for physical imperfection, these afflicted ones are endowed with genius, learning and fortune; yet that ever-morbid consciousness, and the derision of the heartless, or the involuntary shudder of the good, when in their presence, ultimately drive them into seclusion, and bars them for life from the social joys and associations so dear to all. Sometimes their minds are also dwarfed, their society loathed and shunned. These distinctions are unchristian-like and often thoughtless, yet they are none the less hard to bear. Enduring the deformity and its privations is enough, without the heartless raspings and goadings of the thoughtless and ungrateful.

Much as we love to uphold the cause of the afflicted and in every way to mitigate their woes, yet the sad fact exists that the vital organs are often compressed and distorted to such an extent as to seriously interfere with and prevent mental as well as physical development and usefulness; and if vital organs be not involved, the locomotion is so impeded, and the moral effect so depressing and overpowering, that little benefit is expected or realized from their own feeble attempts to obtain relief. But, as before stated, now and then a bright light appears, even in a deformed body, and in spite of earthly fetters compels homage and admiration.

From our long experience we have learned that very few persons know or realize how many of the hapless and helpless await in seclusion their journey to the better land, expecting no relief in this. Even the immediate relatives and friends may seem, in apathy, to be reconciled to this fate, and scarcely an emotion of sorrow or sympathy is felt, or an effort made for their relief. Many even seem anxious to disbelieve the triumphant achievements of the age in restoring such cases. Perhaps it may be from pecuniary considerations, or from being victimized by wandering quacks. Yet the duty to strive to obtain relief does not cease with one or a dozen efforts. So long as deformity and suffering exist, so long should relief be sought. In no other way can duty be discharged.

Sympathy for the maimed, downcast and suffering should prompt every interested friend to seek for their restoration, and the sight of such cases should arouse in every parent's heart a

determination to study and obey nature's laws, to raise and train their children, as to food, exercise, clothing and mental culture, so that these terrible calamities may not befall them; or if it should occur that a child is born with imperfect or deformed parts, to have the trouble at once and properly treated and removed. Mechanical therapeutics is becoming an art of untold importance to our race. It is one of the greatest curative agents of this century, and the profession will yet be compelled to lay hold of it as an engine of power to accomplish what medicines have so far failed to perform.

CHAPTER VIII.

MECHANICAL PRINCIPLES, AND MECHANICO-VITAL OPERATIONS IN THE CURE OF DISEASE AND THE CORRECTION OF DEFORMITIES.

THE progress of medicine as an art, and the application of mechanical principles and physical laws to the cure of diseases and deformities, must go hand in hand. The neglect of these invaluable curative auxiliaries, and, as a consequence, the failure on the part of physicians and people to appreciate their importance, arise more from indifference and want of familiarity with them, than from any well founded opposition. It is so much easier to take a dose of calomel or salts, for the relief of a congestion or a sudden cold, than it is to re-establish the retarded or deranged circulation of the fluids of the human system by natural or mechanical means, by exercise, or the regulation of temperature, atmospheric pressure, electrical condition, &c., that the chances are largely in favor of the former. This fallacy, as well as the sad results of this dependence upon medicine alone, to the exclusion or neglect of hygiene, and suitable mechanical and physical agencies, is attested by the hundreds of thousands of crippled and diseased persons scattered all over our land. The action of drugs upon the system is variable, uncertain, and not well understood. Moreover, they are admitted evils. While they are supposed to exercise curative powers, they are known to be capable of producing damaging effects.

While most of the mechanical remedial agencies are real, not imaginary, their mode of action can be comprehended and explained; besides, there is no danger of making them the instruments of destruction and death. But their chief merit lies in this: *that they give more prompt and certain relief* than can be expected from the use of drugs, and do not leave a sequel of life-long suffering. In considering the mechanical agencies and powers available for our purpose, we shall endeavor to separate them from those of a purely chemical nature. Changes brought about in the human body by purely mechanical forces, do not involve change in constitution or chemical composition, except as molecular change

is produced by accelerated or diminished nutrition. It is true that a deformed and wasted limb may be restored to its natural form, and so nourished as to become like its fellow; but this change is brought about chiefly by augmented nutrition forced into it by mechanical means. The limb is crooked and distorted, muscles contract irregularly, small bones are pressed out of their natural positions, articular surfaces are beveled off, and nothing but the force exerted by a properly constructed apparatus will correct these malpositions and conditions. The blood flows to this limb in diminished quantity, and with a feeble current. By raising the temperature and relaxing its vessels, and, at the same time, placing the limb in a vacuum, the shriveled, shrunken vessels and soft parts at once begin to fill and become distended, pure blood flows into it in greatly increased quantities—kneading, shaking, muscular movements, voluntary, passive, and by machinery, with static or dynamic electricity (as the case may require), complete the conditions necessary for cure. The chemical constituents of the various tissues going to make up this limb, are essentially the same before and after restoration. The mechanical obstacles in the way of a free circulation of the blood have been removed by mechanical means; and the forces in operation to still farther distort and deform, have been so modified and changed in their direction, by the apparatus employed, as to become powerful agents in effecting and maintaining the restoration.

The effects of mechanical force, when slowly and continuously applied to the body, in a given direction, are truly marvelous. In this way, changes in the form of limbs and of bones are produced; so that, as in the foot of a Chinese woman, the original model may be lost, the long diameter of the *os calcis*, or heel bone, being vertical instead of horizontal, and all the other bones of the foot more or less distorted and changed. Precisely the same principle is involved (that of gradual, constant pressure) in the muscular contractions, which result in the deformities and monstrosities so universally found. The weight of the body, or a portion of it, thrown beyond its natural poise, acts, by leverage, to increase and confirm the slight deformity initiated by irregular muscular contraction. The mechanical force exerted upon the trunk of the body by tight corsets was sufficient, in a case which fell under the observation of the writer, to force the small intes-

tines, colon, portions of the liver and stomach, and other abdominal organs, down into the pelvis, where they were distorted and crammed together promiscuously, and almost to the obliteration of their anatomical land-marks; the ribs being flattened and forced down to the hips, and the vital organs so crushed and crippled as to cause the death of the foolish and misguided victim. This was not done suddenly, or by the occasional application of a powerful force; but by the daily resort to a compression with the corset, which, although tolerated for a time, resulted in disaster and death. Thousands of deformities of spine and limbs are but the result of pernicious pressure upon muscles, nerves and blood vessels, depriving the parts of nutrition necessary to their development and use. By the application of a gentle, constant pressure or extension upon a limb, or a set of rigid muscles, or cicatrix, or the adhesion of the smooth surfaces of a joint, the limb may be straightened or lengthened, the scar be overcome, the adhesions of the joint be broken up. So, in like manner the fibrous deposits around the joints, or the many hypertrophies resulting from injuries or perverted nutrition, are found to disappear by absorption, under the application of the same principle, by elastic pressure with air, or other means. Carrying our investigations still farther, we find that the chronic inflammation and congestion of cystitis, and the various congestions and hyperaemias of the uterus and its appendages, may be relieved by calling increased quantities of blood to the surface and to the extremities, at the same time reducing the temperature of the parts, and by ingeniously-applied internal pressure, force the blood out of the diseased organs; also, by removing a part of the pressure of the atmosphere. One or all the limbs or the whole body, placed in a rarified atmosphere, will call a volume of blood away from the trunk sufficient to relieve at once the over-distended blood vessels and capillaries at the seat of disease. The forms by which the application of mechanical means for the cure of disease, and the correction of deformities, are made available, are too numerous and too varied to be treated of in detail. It is not in the apparatus alone (although here it has its greatest scope) that this principle is made available. The influence exerted by mechanical forces, and those mechanico-vital operations which can not be separated from them without doing violence, is a matter of profound

astonishment. In our treatment-rooms the active and passive movements, frictions, kneadings, positions, elevations and depressions of temperature, and increase and decrease of atmospheric pressure, are such as to influence and greatly retard, or augment, as desired, the heart's action, the circulation of the blood in the vessels and capillaries; to increase muscular contraction and tonicity, or to relax rigid muscles; to increase frequency of respiration, facilitate digestion, stimulate absorption, favor assimilation; to increase, decrease, and modify the excretions and secretions generally. Hence, their application and great value in the treatment of paralysis in all its forms, general and local, (except when dependent on fatal organic disease, or the pressure of a foreign body); in the development of feebly nourished muscles, the correction of spinal curvatures, the various forms of female diseases; in stimulating peristaltic and vermicular motion in the intestines, and thus relieving constipation; in influencing the stomach and liver, as in kneading, shaking and succussions, thus affording relief in dyspepsia and derangements of the liver. We find, too, a tonic effect as the result of their employment; hence, debility of the muscular and nervous systems soon shows evidences of improvement under their use. They are found to be invaluable in spermatorrhœa, private diseases, and general prostration. We might catalogue the long list of distortions, malformations, and diseases in which these mechanical principles and forces are either indispensable or of great value in affording relief and effecting cures; but the hints and suggestions hastily thrown together in this cursory chapter will suffice, we hope, to awaken interest and call attention to this all important subject.

CHAPTER IX.

ATMOSPHERIC PRESSURE—ITS EFFECTS UPON THE HUMAN BODY— ITS INFLUENCE UPON HEALTH AND LIFE.

MILLIONS upon millions of people have lived and died, not only unconscious of the vital necessity of air to life, its use in maintaining the temperature of the body, in burning up the worn-out tissues, and in carrying off evaporating and poisonous material; but in ignorance of the fact that it exerted any pressure whatever upon the body, or that variations in this pressure affected health and life.

True, its power was seen in the tornado, the whirlwind, the water-spout, the trade-winds and the typhoon; and its voice was heard in thunder, as its atoms, in the wake of lightning, collided with each other, and reverberated with terrific grandeur; yet these phenomena were not rationally explained or understood until the pressure of the atmosphere was demonstrated and proven. By the barometer, invented in 1643 by Torricelli, this pressure could be measured at various altitudes and under different circumstances. Pascal's elucidation of atmospheric pressure, five years later, threw much additional light upon the subject.

The statement was so startling and the human body was so unconscious of this influence, that it seemed impossible that a pressure of thirty thousand pounds was constantly exerted upon it at the level of the sea; yet such is the well established fact. Soon after this truth was admitted, physicians imagined that they saw in it a glimmering ray of light dawning for the cure of disease, and in accordance with their custom in all time the most vague and contradictory theories were promulgated. Dr. Hudson, of England, in 1664, proposed the treatment of acute diseases by increased atmospheric pressure, and of chronic diseases by diminished pressure.

But in the misty wilderness of theory the subject slept for more than a hundred and fifty years.

The use of diving bells and the startling effects produced by them upon the human system aroused a new interest in the mat-

ter; but, like a somnambulist, it vaguely wandered, reaching no definite results.

After the publication of Colladon's reports on the effects of the diving bell, and Junod's theory of the potential curative power of atmospheric pressure (could it be regulated at will), eccentric and one-idea physicians caught the ærial mania, and started numerous institutions in Germany and France, which were known as "Compressed Air Baths," and "Rarified Air Baths," and were lauded and puffed as "Cure-Alls," but being in ignorance of, or ignoring valuable and important adjuncts, their efforts were unsatisfactory and futile, and their business resulted in failure.

Yet, as a remedial agent, atmospheric pressure, increased or decreased at will, is of untold value. While it is not a cure-all in the sense usually claimed for new remedies, yet to ignore its power is to deprive us of one of nature's greatest boons and blessings. The total pressure at the sea-level, as has been stated, is thirty thousand pounds on an average body; and for the first thousand feet that we ascend the pressure is lessened about twenty-five hundred pounds; at an elevation of a thousand feet, about forty-eight hundred pounds; and at three and a half miles, one-half the pressure, or fifteen thousand pounds, is taken off. This can be readily understood when we reflect that, the higher we ascend the less air there is above us and the more there is below us; and, *vice versa*, the lower we descend toward the level of the sea the greater the thickness of the stratum, and consequently the greater the weight of the air above us. When we ascend a high mountain the heart beats faster, and the blood is thrown to the surface in greater quantities, and with more rapidity. The reason for this is found not in an increase in the force of the heart's action, but in diminished force or opposition, brought about by the withdrawal in part of the atmospheric pressure: hence, the lips, eyes and nose may bleed; the vessels near the surface become enlarged and turgid; face red; and if we go high enough the blood may exude from the mucous membranes of the nose, mouth and other parts. On the other hand, if we descend in a diving bell, or into one of the cassions used in the construction of bridges at London, and more recently in St. Louis, New York and other localities in the United States, the face, hands and surface of the

body generally, become pallid and shrunken—giving, where the pressure is very great, the appearance of death.

The heart is taxed with an additional burden, and is unable to force the blood along through the smaller vessels of the skin and muscles, and thus keep them distended, because the external pressure is forcing it back with terrible power, operating upon the entire surface of the body. The brain and spinal cord suffer more in consequence of this pressure, because of the bony protection afforded them by the skull and spinal column. The skull is an unyielding bony sphere, hence it can not contract like the walls of the abdomen and the skin and soft structures generally, and it surrounds and protects the brain as the spinal column surrounds and protects the spinal cord.

Now when the blood, under this immense pressure, recedes from the periphery and from the soft parts, and is finally driven out of the cavities of the abdomen, and even, to a certain extent, of the thorax, it accumulates in the cavity of the skull and in the spinal column, filling and distending the vessels and resulting in various disturbances and lesions of interest and importance, as we shall see. The lungs and liver are partially protected only, by the bones of the chest, yet they suffer in consequence of the congestion produced by the general pressure.

Paralysis is a most frequent result of increased pressure, and those who died from its effects were found to have congestion of the brain and spinal cord, and sometimes of the lungs. While in the caissons the senses of hearing, taste, touch and smell were impaired, speech was difficult, and whistling impossible. Motion is more difficult than in an ordinary atmosphere, and even a watch will run more slowly and lose time in a dense atmosphere, while it will gain time in a rarer one.

A remarkable fact, in connection with the effect produced upon the body by a *brief* stay in an atmosphere of forty pounds or more to the square inch, is that the ill results are often not apparent until the pressure is removed by bringing the subject into the open air, when pain, vertigo or paralysis may speedily ensue. While the active force is in operation the sensibility is benumbed, and on removal of the pressure reaction occurs, and with it returning sensibility. If persons thus exposed are not speedily removed, death will take place.

When violence or injury causes severe and serious lesions, pain and inflammatory action follow; they do not attend the accident, but follow. So too, when a severe exposure to wet or cold occurs, the pneumonia, or inflammation of the brain, which may be induced, does not show itself immediately; or if we sit upon a hard body, as the edge of a bench or chair, until the leg becomes numb and fails to respond to our will, the electric shocks, the tingling and pain will be felt at the moment when the obstructed circulation is being re-established. Another result produced by a short stay in this compressed atmosphere, is an increased and copious secretion of urine, and also greatly augmented perspiration—the sweat standing in great drops upon the clammy skin. The specific gravity of the urine thus secreted is not lessened, showing an increase in the breaking down and disintegration of tissue. Another evidence of increased activity in these molecular changes is found in the increased appetite of those employed as laborers in these caissons.

If the pressure is long continued, the brain becomes stupefied and death follows. Many practical and valuable deductions may be drawn from the lessons so forcibly taught in the foregoing illustrations. Applying the principle of increased or decreased weight of atmosphere, we will find that facts and experience bear us out in the conclusions that would necessarily follow. Atmospheric pressure, even at the sea-level, by throwing an undue amount of blood into the brain, becomes a fruitful source of brain diseases. We find that the inhabitants of mountains and elevated countries and districts are comparatively free from apoplexy, paralysis, and other troubles and diseases originating at the brain: this is true of all congestive diseases. Thrombus and anemia are exceptions, perhaps, to this rule. In the valleys and low lands, congestions of the brain, liver and lungs are prevalent. The brain is less tolerant of *stimulants* in low lands than in high, because of the increased atmospheric pressure to which it is subjected. Hence, intemperance in eating or drinking, or undue excesses or exposures, are more dangerous in the low countries than in the mountainous regions.

Neuralgia is increased by atmospheric pressure. In very lean persons, where from a deficiency of fat the bones are not sufficiently padded and protected, the pain may perhaps be greatly

aggravated by the mechanical pressure of the air exerted upon the skin covering the prominences, and pressing directly upon the nerves lying between the point of pressure and the point of resistance.

In functional derangement and disease of the liver, a removal to a more elevated locality, other things being equally favorable, is usually followed by decided improvement or complete relief.

From these and kindred phenomena, we find that marked changes do occur under variations of atmospheric pressure, and that by making these facts available as curative agents, when the condition of a patient is such as to require treatment, we proceed to treat the case by applying the means to *increase* or *diminish* the external pressure, as the case demands, and relieve the affected organs or members, or even the *whole body*, and thus afford the blood vessels time and opportunity to return to their natural conditions, thereby preventing *serious, permanent* congestion of organs which control the *vital processes of life*. Furthermore, if a limb is enfeebled by *paralysis* or other cause, blood may be forced into it, and a renewal of muscular action and nerve-force be imparted to the enfeebled member, and its proper functions be re-established.

To do this, it is not necessary to remove the paralytic or billious patient to the mountain regions, or to the sea shore, in order that he may have the benefits of *rarified* or *condensed* air, for by means provided at the SURGICAL INSTITUTE we can place a limb, or any portion of the body, or the entire body, in an atmosphere dense or rare as we choose, thus relieving the brain, liver and spinal cord of the excess of pressure, and bringing back to a wasted, shriveled, useless limb, the returning glow which follows the introduction of an increased quantity of the fluids so necessary and vital to the performance of normal functions.

By these means we cause the blood to flow in large or small quantities, as may be desired, to various parts of the body, modifying the circulation in them at will. It may be suggested that rarified or condensed air can not be permanently provided and supplied by artificial means. Very true; and could we do so it would not be desirable. We only need the use of either to *lift temporarily* the burden, and give to *nature* the opportunity of doing the work she ever faithfully performs in the cure of disease.

Medicines are, or should be, administered upon this principle as a rule. A simple experiment, easily made, will serve to illustrate one of the many effects of atmospheric pressure upon the circulation of the blood, and through it upon the brain, nervous centres and general system. Stand erect, the shoulders thrown well back, chest free: take a deep, long breath, expanding the lungs to their full capacity; retain the air thus forcibly inspired as long as you can, then suddenly expel it by a forced expiration. A sense of giddiness, dizziness, or temporary loss of consciousness, or confusion of ideas, may follow. The excess of air that you have drawn into the lungs displaces and drives out from the lungs a quantity of blood which flows in part to the brain, and the general circulation is momentarily impeded; then, the sudden expulsion of the air from the lungs, calls back the blood hurriedly from the brain, and the result of this disturbance in the equable flow of the blood is seen in the dizziness and confusion that follow the experiment.

Can any sane mind, in this age, doubt for a moment that a difference of one, two, or five thousand pounds pressure upon the surface of the body would make a great variation in the heart's action, in digestion, respiration, or the secretory functions? No machine under heaven, except the work of the Divine Architect, could endure the wonderful range of pressure and change of circumstances. And these are modified in their action by the physical conditions surrounding them. Every creature is endowed with a given amount of defensive and offensive power, and *either* may be exhausted. You may suggest that the air in the body counteracts the external pressure. Not so. "No two bodies can occupy the same space at the same time." Physiologists agree that about three-fourths of the whole body is water; the balance, solid bones or other tissues. Every minute mesh or interstice in these, are filled with water. Now, whatever air water may absorb is contained in the body at all times. You say high pressure causes greater absorption of air by the fluids of the body. Blood taken from animals in these caissons, and tested by the most careful experts, proves it to contain no increased amount of air. But if it were true (which it is not) that more air is forced into the body while under pressure, does this mitigate the condition? Is not air condensed by pressure, and is not every

particle of tissue in the body compressed equally as hard, whether it is done by elastic air condensed on the inside as well as on the outside? There is no evading the fact, that most serious, or most beneficial results, may follow the change of atmospheric pressure.

CHAPTER X.

ELECTRICITY.

FVER since the discovery of this subtle agent, the medical profession has been trying to utilize it as a remedial agent for the treatment of diseases. At the present time it is used to quite a considerable extent, by a few scientific physicians and surgeons, with results that are often times wondrous. It is an agent of great power, and should never be used except as prescribed by those who understand its peculiar qualities. The dose to be administered should be as carefully defined as that of any of the powerful drugs and medicines of the *materia medica*. It would be quite as scientific for the physician to direct his patient to take medicine, without prescribing the kind, quality and quantity, as it would for him to direct him to take electricity without prescribing the proper dose to be taken, as well as the kind, quality, and quantity of it; for it should be remembered that electricity has various forms; is possessed of several qualities; and may be varied in quantity, from a gentle, insensible current passing through the system, to that of very powerful shocks. Moreover, it is not introduced into the system as medicine is into the stomach, but can be applied directly to the diseased organs, or any portion of the body; and this wonderful power of adaptation is the principle that gives to it, among other things, its inestimable value.

The people have faith in its curative powers to such an extent that many will trust the charlatan to administer it, and doubtless many have been benefited by its use under such circumstances; but, on the other hand, very great harm has often been done by such unscientific and indiscriminate use of it.

It is an agent of too great a power to be trifled with or to be used by unskilled hands, and no one should permit its use, except it be prescribed by one who thoroughly understands how to properly administer it. As a remedial agent, it is indicated in many forms of nervous diseases. Of all the known remedial means in use at the present time, none are so closely allied to the so-called nervous force as electricity is; and none come so

near supplying the place of the interrupted nervous fluid, that originates in the nervous centers, as it does. Such being the fact, this wonderful agent is entitled to a high place in the list of remedial means, for the treatment of diseases arising from or followed by derangements and disturbances of the nervous system. In scientific hands, electricity is superseding the use of many medicines that were formerly used.

When the use of electricity is more generally and better understood; when the general laws that govern and control the health are more carefully observed by the masses, very much less medicine will be consumed; people will live longer, enjoy more immunity from disease, and be infinitely happier in all stations and relations of life, than can possibly be under the present artificial system of living and overdrugging.

It may be asked what are some of the indications for the use of electricity. It is a powerful *stimulating, sedative tonic*, and as such is indicated in a great variety of diseases. Very many diseases of apparently opposite characters are treated successfully by this agent, and it is because of the wide range of its therapeutical use, that makes it so valuable in the hands of the judicious electrician. When applied to the diseased body it *improves nutrition*, and renders direct aid to all the processes of restoration.

In paralysis, when the limbs are shrunken and powerless, it stimulates the flow of blood to the parts, increases the nerve force, and thus favors the muscular growth and renews the life and actions of the limbs. In neuralgia, the result of its use is the re-establishing of the interrupted nerve currents, and thus relieves the pain. Its remedial powers are often manifested in the removal of abnormal growths, tumors, etc. It is not intended in this work to designate the particular diseases in which its use is known to be of value, but to state to the reader that we resort to its use daily in a very great variety of diseased conditions, with success, and in many cases the results are marvelous. Administered with proper caution and skill, it works wonders in the art of healing, causing the lame to walk, the blind to see, the deaf to hear, and unloosening the paralyzed tongue, that it may speak. This is not an over-drawn picture, for all these results and conditions have occurred in the treatment of patients in the NATIONAL SURGICAL INSTITUTE.

CHAPTER XI.

SURGERY.

THE word surgeon is a contraction of the French word *chirurgien*. The two original words from which it was derived mean "hand" and "work;" hence, surgery is understood to be that part of the healing art which relates to the treatment of external diseases, and particularly to the manual operations employed for their cure. The popular idea that surgery consists mainly in the free and extensive use of the scalpel and the catlin—in other words, in "cutting and slashing" generally—is quite an erroneous one. If the people are to be set right upon this subject, give them correct, sensible, and reasonable ideas of the great mission of surgery; let them understand that surgery is not a thing to be dreaded and shunned, but that genuine surgery is their true friend and benefactor.

Before the people can accept this truth, much of the pomp and circumstance thrown about capital and severe surgical operations must be abolished, and the people be informed that the object is to save and preserve, rather than mutilate or destroy injured and diseased portions of the human frame divine. The operation should always be for the good of the patient, not for the benefit of the operator. There is a world-wide difference between genuine and spurious surgery. The one is unassuming, conservative, yet decided and bold; gentle, yet unmoved and intrepid; seeing and comprehending the end from the beginning, yet giving no unnecessary pain or inconvenience in its attainment; mindful only of the patient's welfare, and oblivious of private or mercenary ends. The other seeks, first, to enhance the reputation of the operator, making his claims paramount to those of patient and friends, and deciding doubtful points in his favor.

The populace is charmed, amazed, and captivated by the successful and bold capital operation, without once stopping to inquire if the sacrifice was unavoidable. Let it be understood that the chief glory of surgical science, and the broad, inviting field

for its most earnest and successful labor, are not in brilliant and great operations alone, where members are removed or destroyed; but rather in the every day work, where pain, suffering, and deformity are relieved and removed, lives saved, and the afflicted restored and made glad.

Many surgeons have fallen into the error of attaching too little importance to the preparatory, and also to the after treatment of the patient. In the majority of cases the "operation" is in reality but a small part of the treatment, and should not receive exclusive or undue attention. It is infinitely better to rely more upon mechanical devices, and well gotten up appliances for the removal of a tumor, the cure by absorption of an hypertrophy, or the straightening of a crooked limb, than to resort hastily to the knife, make a dashing operation, and then neglect the careful, patient work which should follow, in order to make it in the highest degree successful. Experience has taught that the severity of surgical operations may be greatly modified, the shock lessened, danger and pain avoided or mitigated, by due attention to conservative principles. Not only so, but it also demonstrates the fact that many surgical operations which, if performed early in the treatment, would be formidable in character, may be avoided entirely, and the same results, or better, be reached by proper mechanical and medical means.

Let it not be understood that we underestimate or place too low a value upon real skill and dexterity in the performance of necessary surgical operations. What we protest against is the fact, that the desire to improve an opportunity and gain favor, too often predominates in making a decision as to the propriety and necessity of putting the patient upon the operating table, and the doubt is given in favor of the operator, not of the suffering and powerless patient. The proportion of cases in which surgical interference is required at once, in order to save life, or avert terrible calamity, is small indeed when compared with the great army of patients, chronic sufferers, who drag along from day to day, dying for want of proper surgical treatment.

An artery is occasionally wounded or severed by accident or design, a grain of corn or a bean passes suddenly into the wind-pipe, a sudden asphyxia may occur, or poison may be swallowed, in either case requiring prompt, ready, and efficient surgical or

medical aid; but these cases occur infrequently, and the surgeon who waits only for opportunities to ligate arteries, open the wind-pipe, re-establish suspended respiration, administer antidotes, or use the stomach-pump, will find much leisure for reflection and long intervals between calls; while he who buckles on the whole armor, and by faithful, earnest, unremitting work and study, qualifies himself for the discharge of the duties and responsibilities of the true surgeon, may reasonably expect his full share of professional work, and, if true to his trusts, in the end he may claim the reward of "well done, good and faithful servant."

CHAPTER XII.

DISEASES OF THE BONES.

BONES are composed of animal matter and earthy phosphates, the latter increasing with age, rendering the bones friable and brittle.

The exterior or cortex of the bones is dense and hard, and is nourished by blood vessels ramifying the investing or periosteal membrane.

The interior of them is cancelous, soft, and spongy, and is nourished by blood vessels ramifying the canals. If the exterior of a bone should be denuded of its nutrient membrane, it dies, and the dead pieces exfoliate.

The interior being cancelous, is liable to deposits of a cancerous, scrofulous, or tuberculous character.

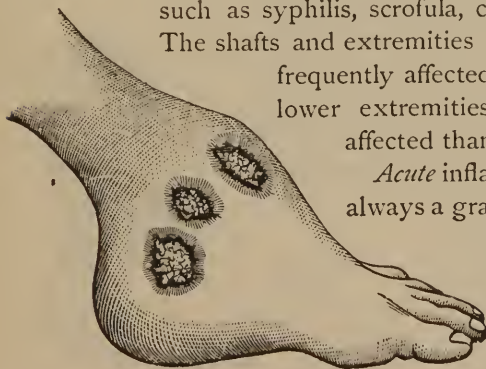
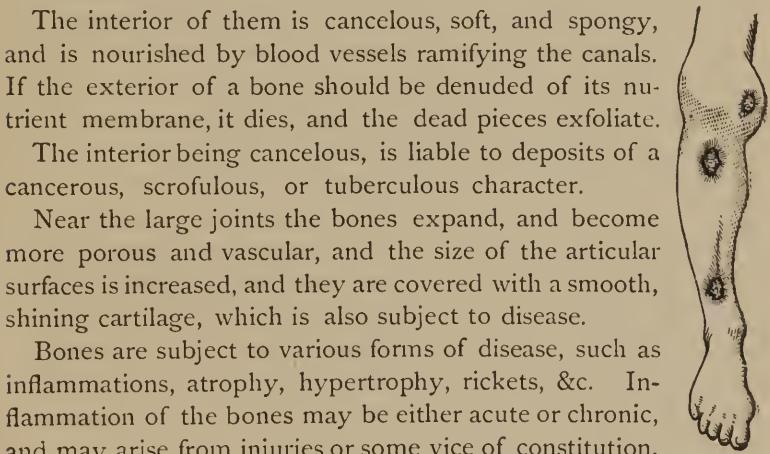
Near the large joints the bones expand, and become more porous and vascular, and the size of the articular surfaces is increased, and they are covered with a smooth, shining cartilage, which is also subject to disease.

Bones are subject to various forms of disease, such as inflammations, atrophy, hypertrophy, rickets, &c. Inflammation of the bones may be either acute or chronic, and may arise from injuries or some vice of constitution,

such as syphilis, scrofula, cancer, rheumatism, &c.

The shafts and extremities of long bones are most frequently affected, and the bones of the lower extremities are more frequently affected than those of the upper.

Acute inflammation of the bones is always a grave affection, and is generally the result of exposure or injury, and is usually met with in feeble and scrofulous sub-



jects, while growing. It may be ushered in with a deep, aching pain, or with high fever and great constitutional disturbance, or both; the bone becomes exceedingly tender, the surrounding tissues soon become involved and swollen, rigors supervene, abscesses form, and the matter finds its way out, and fistulous

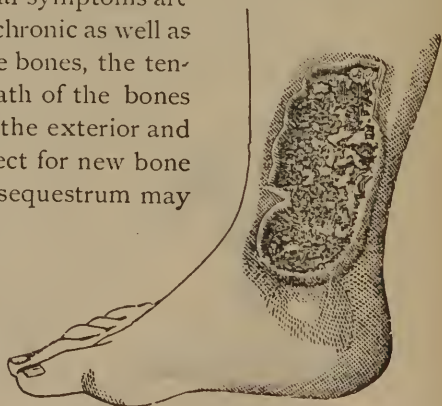


openings are made through which it continues to discharge, frequently accompanied with dead pieces of bone. If the inflammation

should commence in the cancellous structure, this condition is not reached so soon as when it commences in the investing membrane, but in either case it almost invariably ends in the death of more or less of the bone, which then acts as a foreign body, and must be thrown off by the efforts of nature, or removed by surgical interference. Sometimes large portions of the cancellous structure dies, and is enveloped within healthy or sound bone, having fistulous openings through the shell or cortex. These pieces of dead bone are called sequestra.

Chronic inflammation of the bones is but little else than acute inflammation modified by time or circumstances. The bones are invariably found carious, and this condition is sufficient to continue the inflammation as an effort of nature to rid the system of the broken down and disintegrated structure. The symptoms, as would be expected, are nearly identical—the only difference being in intensity; the pain is less severe, the parts are not so tender, and the constitutional symptoms are less urgent. However, in chronic as well as in acute inflammation of the bones, the tendency is to *necrosis*, or death of the bones or parts of them. Should the exterior and interior both die, the prospect for new bone forming is hopeless; but a sequestrum may be removed with every prospect of a new formation, provided the nutrient membrane be left sound.

Disease of the bones, either acute or chronic,



may be attended with, or followed by, more or less deformities of one kind or another, and hence too early attention can not be bestowed upon this disease, as frightful ravages may be avoided, and great pain and deformity prevented.

Hundreds who are limping on such legs and suffering with such arms, can just as well have sound ones if they desire them. Their treatment is simple, giving relief at once, and a cure in a few weeks.

CHAPTER XIII.

DISEASES OF THE JOINTS.

† IT is unnecessary to weary the reader with a lengthy dissertation on the anatomy of the joints, or the pathology of their diseases; but in order that we may convey some idea of the terrible consequences resulting from their disease, we will state in brief that the bony framework is admirably formed, and peculiarly adapted by an all-wise Creator, for the support of the numerous organs and complicated machinery which compose the human body, and the joints are far more intricate and beautiful in construction and movements than the mind of man can conceive.

The bright, silvery bands, or glittering ligaments, which hold the bones together; the smooth, shining cartilage tipping the ends of the bones and lining the sockets; the soft, elastic cushions between the bones of the spinal column, giving varied and easy motion and adaptation, being constantly reproduced as fast as worn out; the lubricating fluid filling the sacculated synovial membrane, lubricating the joint and preventing friction; the porous, vascular, and semi-elastic condition of the ends of the bones, with projections for the attachments of muscles, and grooves through which the tendinous chords glide, each part performing the work assigned it so perfectly, and all acting in such harmony, render the joints objects of profound study and admiration—and, when diseased, produce great depression and untold suffering.

Multitudes throng the thoroughfares of our cities, and may be seen all over our broad land, distorted and twisted into every conceivable shape, supported by crutches or canes, hobbling their way through the world—objects of pity to the sympathetic, and subjects of derision to the thoughtless. Like King Richard, these unfortunate cripples “have no delight to pass their time away, unless it be to spy their shadow in the sun, and descant on their own deformities.”

The great distress and suffering to which these unfortunates have been subject, is only known to themselves. Their mental

agony is but little less than their physical suffering. A consciousness of increasing deformity, the physical suffering always present, the cause of which is but imperfectly understood, the prospects for relief under the ordinary management naught but discouraging, the constant dread of what the future may bring forth, the destruction of all early formed hopes for the future of life—all these prey upon the mind, rendering the poor unfortunates miserable indeed, and objects of unfeigned pity and commiseration.

Disease of the joints frequently comes on insidiously. It often arises without any apparent cause, beginning with a slight pain or a scarcely noticeable inconvenience. This is followed by a sharper pain, or possibly by some inflammation. The sufferer pays little or no attention to these premonitory symptoms, and soon there comes a sense of stiffness in the joint, with restricted motion. Then, gathering strength by what it feeds upon, the pain becomes intensified, the throbbing more severe, great swellings with rigors supervene, large abscesses form, which bursting, discharge, and a fearful work is done. Thus the strong man or the tender child (if left alive), is twisted and deformed.

The joints most subject to disease, and which when diseased produce the greatest amount of physical suffering, constitutional disturbance and deformity, are the spine, hip and knee.

Inflammation of the joints usually begins either in the synovial membrane, or in the soft and spongy portions of the bones, and from thence spreads to the surrounding tissues, frequently involving all the structures in and around the joint. The synovial membranes, like the serous membranes, which line the cavity of the abdomen, the walls of the chest, and invest or cover the brain, are shut sacks, highly vascular, exceedingly sensitive and irritable, and, when disturbed by disease or injury, are prone to active inflammation, which frequently runs a rapid course, ending in effusions, adhesions, fearful destruction and deformity.

It makes but little difference whether the inflammation begins in the synovial membrane or the bones, the entire joint is sooner or later involved, and if not promptly and properly treated must almost invariably end in great suffering and deformity, or death.

The fact is now well established and admitted beyond question (as it should have been long ago), that there is but one way to treat such diseases successfully, and that is with a well fitted

apparatus. This apparatus—as a foundation, a necessary prerequisite to successful medication—must be changed and re-adjusted from time to time, as each individual case may require, and as the cure progresses. Certain ends are to be accomplished by it, which can be accomplished in no other possible way. Medicine and local applications are important and useful as adjuncts, but if the patient is to be saved months of great suffering and life-long deformity, proper mechanical appliances are absolutely indispensable.

HIP DISEASE.

When we consider the importance of so useful a joint as that of the hip, we are surprised at the indifference so often manifested as to the consequences resulting from the diseases effecting it. If parents would only consider, and recognize fully their



As Received.

After Treatment.

As Received. After Treatment.
The sores are healed
and limb restored.

responsibility to their children, and their duty toward them when overtaken by disease, they could not calmly observe the progress of that dreadful malady, hip disease, which inflicts so much torture, and entails such hideous deformity, without availing them-

selves of every means which Providence has brought within their reach for their relief; and yet, all about us, parents may be seen watching with apparent indifference, while from day to day the monster grapples with the very life of their children, and insidiously works their destruction, or blasts forever their future prospects for usefulness, leaving them stalking monitors of careless indifference.

The first indications of this disease, in many instances, are so obscure as almost to escape the notice of the patient. The attention may be first arrested by a stiffness about the hip, restricting, somewhat, the motion of the joint, producing a sense of weariness of the limb, especially after exercise; sometimes a dragging of the foot, with a dull, aching pain, extending down the thigh to the inside of the knee, is observed. Gradually the pain in the knee becomes more and more intense, occurring in paroxysms, chiefly at evening and night; handling the limb provokes an increase of pain. If the patient stoops, he will bend the sound knee only—if he stands, he will place the afflicted limb in advance of the other—he can not support the body in a perpendicular direction, but is obliged to rest on the sound side, both in the erect and recumbent positions.



As Received. As Dismissed.



As Received. As Dismissed.

As the disease advances, the patient becomes feverish and fretful, and, toward evening and night, restless; loss of appetite, with general debility, supervenes; the muscles of the thigh become soft and flabby; the hip is flattened, and the leg lengthened. If the disease be not arrested, all the symptoms are greatly aggravated; the pain in the knee becomes more intense;

movement of the limb produces intense suffering; deep seated pain is felt in the socket; the surrounding parts become swollen, hot and tender; the fever is augmented, and is of a hectic type; rigors are felt; abscesses form, which, when opened, discharge a sanious or curdy matter, sometimes attended with pieces of bone. The head and sometimes more of the bone is destroyed; the ligaments are softened and give way, and the bone slips from the socket; the muscles contract, and the limb is shortened from three to four inches; and, if the patient be not worn out with the long continued suffering and consequent waste, he may finally recover, but with a most distressing deformity and lameness.

Thousands of children and adults annually fall victims to this disease, and from the prosecution of the old, erroneous, tedious, and torturing treatment, many, after long endurance of a cruel *regimen*, succumb, and, in exhaustion, death relieves them of their torment. Others, scarcely less fortunate, endure their sufferings until, after formation of abscesses, discharge of matter, diseased bones, destruction of joints, untold suffering and wasting of the constitution, nature attempts relief and leaves them deformed for life. These are not far-fetched or isolated cases, but the heart would ache and the blood run cold at sight of the untold number of just such sufferers all over our land. And though a father's stout heart and protecting arm, or a mother's tender love for her suffering child, would sacrifice all for its relief, yet with disappointed hopes their aching hearts recoil as the child goes down. Had not hundreds of just such sad cases, on their way to untimely death or permanent deformity, applied for relief, sympathy never would have been so highly wrought, or necessity for better means of relief so keenly felt. No one but the pitiful sufferer can know or feel the reality of a disease of the largest and most important joint of the body, and the disease of no other bones except the spine is ever fraught with such pain or danger. Any parent who does not, upon the very first symptoms of disease of the hip or spine, at once seek relief at competent and experienced hands, is either unconscious of the child's impending doom, or lost to all parental love or care; and the physician who does not, upon the application of such cases, at once direct them to a surgeon who

manufactures and fits proper apparatus for relief and support, and makes a specialty of the treatment of such cases, does not do his whole duty to the suffering or himself. Humanity and philanthropy should brand with ignoble scorn any attempt, through selfish interest or professional pride, to keep a sufferer from going to institutions established for the cure of such cases. Your faithful and competent physician, who has long and ably combatted all the complicated or fatal forms of fever, etc., is no more prepared to treat hip or spinal disease than a blacksmith to make a steam-engine, a house-joiner to make a piano, or we to treat consumption or asthma. It must be made a specialty. Peculiar and perfectly adapted apparatus, which can only be made by skillful workmen, directed by the experienced surgeon, must be applied, and treatment quite different from that of ordinary inflammation pursued.



Figure 1.

Some cases of disease of the hip joint are easily traceable to falls, injuries, etc., but the majority of cases come without any assignable cause or accident.

Usually the first symptoms are weakness of the leg, lameness, and a sensation of fatigue and pain in the knee; sometimes in the calf of the leg, ankle, or along the side of the thigh; but in most cases, for a long time, the pain is referred to the knee. The limb is handled cautiously, kept a little drawn up; but when straightened seems a little too long. At night the child is suddenly aroused and cries out with pain, and sleep is disturbed by a twitching and jerking of the leg. During this stage of the disease the inflammation is confined to the acetabulum (socket) and head of the femur (thigh bone).

The synovial and other membranes now begin the fearful work of destruction. First the swelling forces the bones apart, giving the limb a lengthened appearance; the hip is flattened, and assumes a peculiar position. The flesh or muscles of the leg

diminish; the limb is smaller; this continuing, softening of the bones, destruction of the synovial membrane and ligaments rapidly follow, and while in this condition the symptoms become aggravated by contraction of the powerful muscles of the hip,

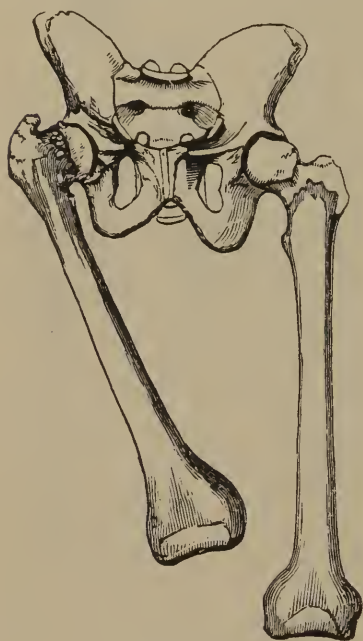


Figure 2.

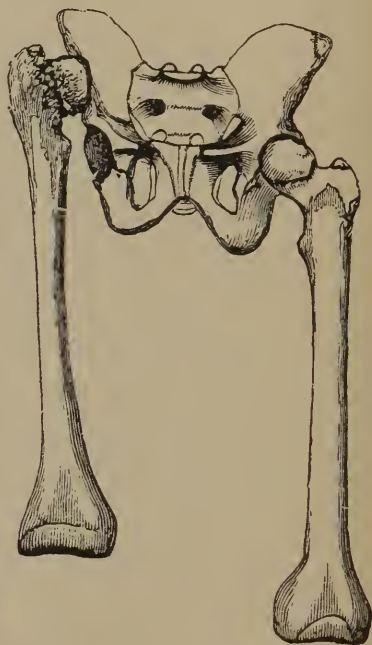


Figure 3.

and the head and neck of the bone by decomposition is changed in shape. (See Fig. 1). The hip is more or less swollen and painful, and in many cases abscesses have, either before or during this change, formed and broken, discharging a great quantity of matter. As the disease progresses, the limb is shortened. (See Fig. 2.) The patient, from long pain and suffering from the terrible disease, losing flesh and strength, looks more or less pale and haggard; and, during the formation of matter, fever, chills, loss of appetite, etc., generally occur.

As the disease progresses, the destruction of the bone continues; the dislocation becomes greater as the head of the bone, by contraction of the muscles, slides higher upon the pelvis. (See Fig. 3.) The neck or head of the femur becomes shorter,

or even obliterated. Extensive caries (death of the bones) takes place; the disease continues month after month, and sometimes year after year. Although the agony is to some extent abated, yet a cure is by no means approaching, if left to the ordinary treatment. If nature begins to make repairs, it is simply done by effusion of lymph and binding the diseased bones together, retaining the limb in the contracted and deformed condition, making the leg from one to six inches too short, the hip thrown back, and the joint stiff.

The foregoing is the course of nine out of ten of all cases of hip disease. Occasionally we see an isolated case attended with astonishingly little constitutional disturbance, going through all the stages, free from suffering. While this may be occasionally true, far—lamentably far—is it from the untold agony and suffering endured by many; and, while these mild cases occur, there are others to whom death would be a most welcome messenger, since, even if they live, it is only to endure pain and deformity.

TREATMENT.

Treatment of disease of the hip should commence early, with a perfect apparatus, keeping the diseased bones from being forced together by the contraction of the large muscles of the hip, and relieving at once all the pain and twitching of the limb.

A thorough constitutional treatment should at once be adopted, to sustain the vital forces and prevent decline. We can not insist too much upon immediate attention to such cases, or too warmly deprecate or denounce the indifferent manner in which they are generally treated. Even in this late day of scientific research and mechanical triumph, when such ample means for the restoration of the deformed are afforded, we find some physicians so ignorant or indifferent, as to grope in darkness, and seemingly shun or denounce the only means of hope and relief; and, while they stand professedly as guardians of the sufferers' physical safety, they seem to allow them to struggle in the agonies of pain, torture, and deformity, with scarcely an emotion of pity or an effort for relief. This is, however, we are happy to know, the case with but very few of the physicians at the present day, as all who are honest, and care for the welfare of their patients,

will frankly confess that they have not the necessary apparatus for the successful treatment of such cases; and hundreds are being sent to this institution, which has been established especially for their treatment. The local practitioner is thus relieved of the great care and anxiety, and the fruitless task of treating such cases without apparatus and other facilities, as well as of the reproach of the patient and censure of friends on account of deformity and failure to cure.

As soon as inflammation commences, the limb becomes slightly flexed, and as the disease progresses, the limb obeys the law of all other inflamed joints, seeking the most comfortable position. An inflammation or irritation of any part produces contraction of all the muscles involved, or in close proximity to—as, when a leg is broken, the irritation causes the muscles to contract and shorten the limb. When the abdomen is inflamed, the knees are drawn up, etc., etc. Now, the large gluteal, psoas, obturator, and other muscles, *contract* in hip disease, and the position occupied by all limbs with inflamed joints is that which will allow relaxation of the greatest number of muscles at the same time.

For instance, suppose the normal position of the leg in a line with the body (No. 1, Fig. 12), and in this condition the gluteal muscles (back part of hip) are fully contracted, and the psoas muscles (front part of hip) relaxed, and when the knee is drawn up close to the abdomen (No. 3), the opposite muscles are relaxed and contracted, *vice versa*. These muscles, being antagonistic, will be most at rest just half way between the extreme points of motion (No. 2). Thus all inflamed joints become crooked, and hence the danger of deformity, and the necessity of immediate attention, with suitable and comfortable apparatus, to prevent or relieve this difficulty.

The rubber helix is a most admirable instrument for the treatment of the inflamed joint, applying constant cold with a stream of water, without moisture to the limb or wetting the clothes, maintaining a low temperature during the active stage of disease—often, if not always, preventing suppuration.

Hundreds of cripples, who have been made so from this disease, are going through life upon crutches, with the leg too short, and flexed upon the abdomen, as in Fig. 10, who, by the application

of proper apparatus, might have the limb straightened, thereby lengthening it and making it useful. Fig. 11 represents back view of patient with apparatus applied.



Figure 10.



Figure 12.

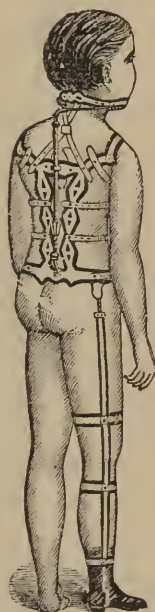


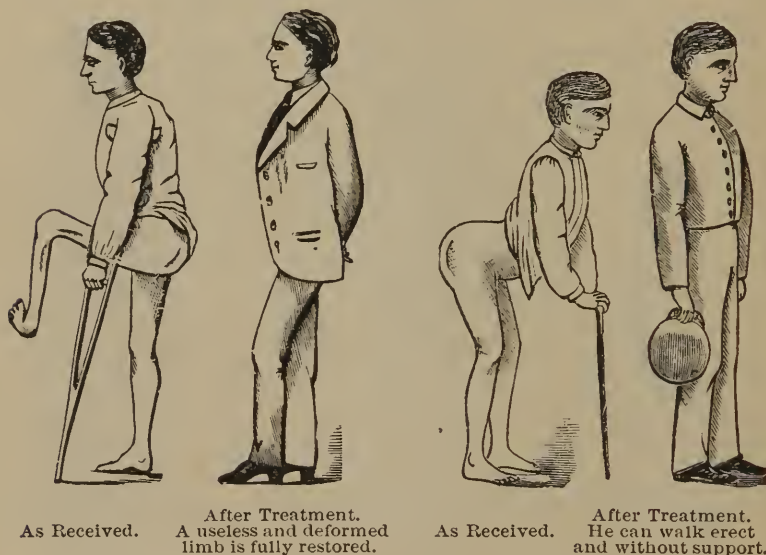
Figure 11.

If your child or friend is suffering severely, and is very weak or emaciated, do not listen for a moment to the statement that it is too bad or weak to treat, or to have attention. Hundreds of persons are brought to the SURGICAL INSTITUTE on pillows or couches, to obtain relief from suffering and pain, and prevention of deformity. Do not wait until destruction has done its work, for the joint, ligaments, bones, and all the delicate structures are being destroyed. We say again, come at once, to save pain and deformity.

In the whole catalogue of human suffering, that of caries of the hip joint is most to be dreaded, and, strange as it may appear,

little has heretofore been done to mitigate the torture or cure the disease. The barbarous moxa, blisters, seaton, the cautery, the miserable, torturing farce of the weight and pulley, etc., etc., have done their work to increase suffering and deformity.

Take warning, and as you love your child or your own life, do not allow the above treatment, or any apparatus to be applied which,



by straps, pads, supports, plasters, or any device whatever, goes around the diseased hip or groin in any manner. All such appliances do harm; they excite contraction of the muscles, and press upon the tissues around the joint, increasing the sloughing and deformity. The diseased hip is always too high without this pressure. Strange as it may seem, we have devised a complete apparatus, that extends the diseased limb by pressing upon the sound hip, leaving the sore hip free from irritation, and for the application of remedies. And if you have been so unfortunate as to have ordered or obtained any apparatus that is not made upon this (the only true) principle, throw it away at once. You never can cure with it, or get your money out of it, and the longer you wait to see the result, the farther you are drifting by neglect from recovery, and the more you will have to regret at last.

. SUCCESSFUL TREATMENT.

Letters from patients who have been under treatment of the
NATIONAL SURGICAL INSTITUTE:

I was a sufferer for years with Hip Disease. I found no relief until I applied to the National Surgical Institute, and after receiving treatment from that body for a short space of time, I was restored from a comparative dwarf to perfect health. To my fellow sufferers, I would say that the Institution is worthy your attention. To the skeptical, I would say, investigate the matter. To the afflicted in general, I would say, be relieved.

August 24, 1873.

JESSE ROGERS,
Speedwell, Tenn.



As Received.

The results attained
by skill and perseverance.

My daughter, when eleven years old, was attacked most violently with hip-joint disease. Her sufferings were intense. The leg became drawn up, and was two inches too short. I finally placed her under the treatment of the National Surgical Institute, when all her pain and deformity were removed, the limb made as long as natural, with the motion of the joint retained.

WM. H. TYLER,
Reelsville, Putnam Co., Ind.

My son (Charlie) suffered for years all the horrors attendant upon the severest case of hip disease. I tried all the means ordinarily used in the treatment of this class of cases, but to no effect other than to increase the trouble. I had become

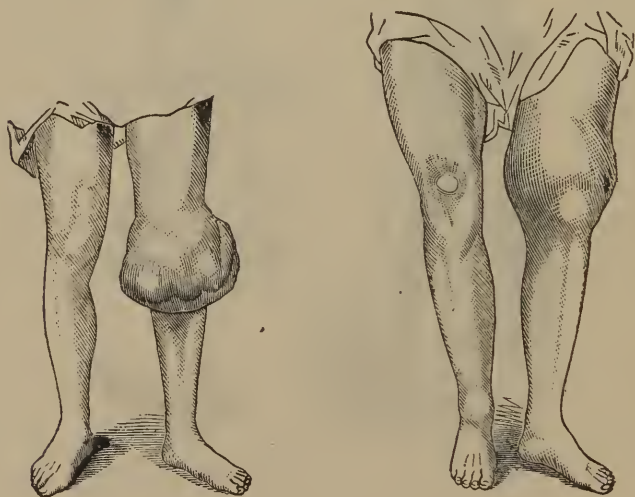
disheartened and discouraged, in the belief that his case was hopeless, and that he would be doomed to a life of misery and deformity, when I heard of the National Surgical Institute, to which I at once made application, and in the treatment which followed I was made to rejoice in the restoration of my dear child, and I revere the memory of this most noble and able Institution. The disease was entirely eradicated, the deformity almost entirely removed, and he is now able to go about as well as any one.

MRS. E. J. HARRISON,
Belleville, Ill.

DISEASES OF THE KNEE.

The knee, like all other joints, is subject to inflammation and disease.

The articulate ends of the bones are broad, the synovial membrane large. The movements of these joints are complicated

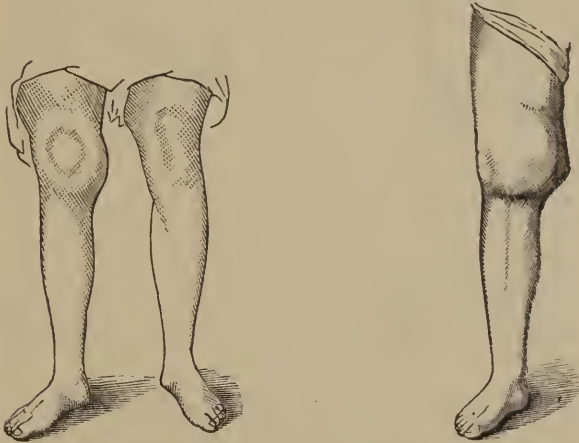


and often rapid, at the same time they support the weight of the entire body. They are less protected by muscles and other tissues, consequently, more exposed to violence, injury and disease than most of the other joints; hence, statistics show that of all the various joints of the body, diseases affecting the knees afford a very large per centage.

Disease of the knee may result from injuries, rheumatism, tubercular deposits within the soft and spongy ends of the bones, scrofula, syphilis, etc.; and is productive of great depression, dis-

tress, and suffering, generally resulting in loss of limb or fearful deformity.

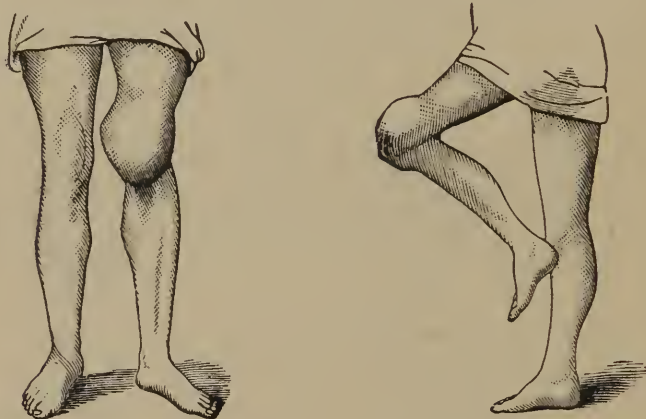
The importance of the knee-joint in locomotion, and the almost certain destruction of it if left alone or badly managed when diseased, renders it absolutely necessary to arrest the inflammation as promptly as possible. The ligaments soon become softened and lengthened, permitting displacement of the



bones, abscesses may form in or around the joint, frequently the muscles contract and distort the limb, the bones of the lower leg are drawn backward so that the knee-cap and bone of the thigh shelve over, adhesions of the fibrous structures take place, the cartilages are destroyed, and the bones thus divided, coming in contact, sometimes grow solidly together, producing true ankylosis or bony union.

This contraction is due to the fact that the same trunks of nerves whose branches supply the muscles moving the limb, also supply the interior structures of the joint, and when inflamed, are irritated and keep the muscles in a state of spasm or contraction. This spasmodic contraction of the muscles draws the ends of the diseased bones together, and with every motion of the joint there is a *grinding irritation*, which constantly augments and continues the inflammation. So long as this continues the disease will continue. We must separate the diseased surfaces and remove the source of constant irritation.

We might as well expect a toe crushed under a stone to get well while the stone remained upon it; all the medicine in the world would not accomplish a cure while the cause producing the trouble continues in force. We must first remove the stone;



then, with proper care, the member will recover. So with disease of the knee; we must remove the pressure by separating the bones which are held firmly together by contraction of the muscles, and by so doing we will relieve that source of irritation so that a cure may be effected. To do this, well fitted apparatus is absolutely necessary. In no diseases has mechanical surgery been



As Received. As Dismissed.

As Dismissed.

As Received.

so triumphant as in the treatment of the diseases of the joints, and the knee-joint is no exception to this rule. Hundreds of limbs are thus yearly saved from destruction, ulceration, and needless amputation.

RESULTS OF TREATMENT.

My daughter's knee had been diseased for eight years, the joint being much enlarged, and the limb flexed at right angles. All other treatment failed, until I took her to the National Surgical Institution, at Indianapolis, where the pain was removed, the enlargement reduced, and the limb is now almost entirely straight, so that she can walk about comfortably with a cane. I believe in two or three months she will be entirely restored.

M. T. BRYAN,
Granville, Ohio.

My daughter's knee is improving very fast. The leg is made perfectly straight, and when placed under your treatment, was bent at right angles, from the knee. She will soon no doubt be well entirely.

JAS. F. MILSTEAD,
Palo, Caldwell Co., Mo.

THE ANKLE JOINT.

Like the hip and knee, the ankle joint is exposed to injuries from falls, etc., and consequent inflammation and disease.



As Received.



As Dismissed.



As Received.



As Dismissed.

Scrofula, syphilis, and gout effect this joint, but not so frequently as the hip and knee. The structures entering into the composition of the ankle joint, being identical with those of

the other joints, render it, when diseased, subject to the same morbid changes which effect them. The synovial membrane, the bones, cartilages, and ligaments, are all subject to disease; abscesses may form in and around the joint, producing great deformity, suffering, destruction, and lameness. As the diseases effecting this joint are identical with those effecting the others, it is but rational to conclude that the treatment must be conducted upon the same general principles, which consist in extension, rest, and such constitutional and local measures as the necessities of each individual case may demand.

By these means cures are made, and untold suffering, lameness, and deformity are prevented or relieved.

THE SHOULDER JOINT.

The shoulder joint is composed of the same kinds of structure as enter into the formation of other joints; and, being a ball and socket joint, it admits of a great degree of motion, and is more constantly used than other joints. It would therefore be a matter of some surprise that it is not more frequently diseased, were it not for the fact that it is relieved of the constant pressure to which the hip and knee are subject, in not having to support the weight of the body. Nevertheless, it is occasionally subject to disease resulting from injuries, rheumatism, scrofula, tubercular deposits, etc., and when diseased is attended with great suffering. The bones, cartilages, synovial membrane, and other tissues become involved. The constitutional symptoms are severe. Abscesses form around the joint, which, discharging, leave fistulous openings, frequently connected with dead bone, small pieces of which sometimes escape. There are few diseased conditions more severe than this, as they invariably lead to complete loss of the joint if not promptly and properly treated.

The treatment should begin early. Any pain deep seated and continued in the shoulder should be regarded with suspicion, as it may be the precursor of serious disease of the joint.

Dislocations of the shoulder joint are frequently left unreduced, thus depriving the patient of the free use of the arm for life. This maiming is not, as is generally supposed, incurable. During the past two years, we have treated and entirely replaced and cured many of these old dislocations of the shoulder, to the un-

speaking joy of the sufferers. We append the names and addresses of two such, that parties similarly afflicted, who desire to do so, may learn the facts from the patients themselves. We could give many others, but these will suffice: Mr. Peeples, Shelbyville, Ind; Mr. Beach, Nebraska City, Neb.

THE ELBOW JOINT.

As in other joints, so in the elbow, we meet with inflammation involving the ends of the bones, synovial membrane, and, indeed, all the structures entering into its formation. Disease of this joint may be the result of injuries, rheumatism, scrofula, cold, etc. This joint being more complicated and exposed than the shoulder, is more frequently effected.

When it is inflamed, it is subject to the same changes which take place in other joints, and which, if not arrested, will very generally end in destruction.

Early attention should be given to this disease, inasmuch as it sometimes runs a *rapid* course, and the patient is made a cripple before he is aware.

The same general principles apply in the treatment of this as in other joints; rest, extension, local applications, and constitutional remedies.

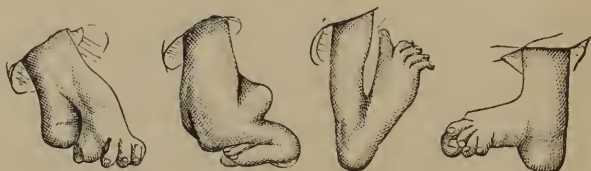
THE WRIST JOINT.

Diseases of the wrist are usually to be regarded as grave, inasmuch as the small bones constituting the carpus are numerous—each supplied with articular surfaces and synovial membranes, and there may be no limit to the inflammation, as they are in opposition one with another. Inflammation of the wrist is usually the result of rheumatism, scrofula, and injuries, and, like the same affections of other joints, may produce the same morbid results.

Too early attention can not be bestowed in the treatment of this joint, as the cartilages are soon destroyed, and the bones of the wrist may unite and become ankylosed, and the joint rendered useless. Adhesions often take place, producing permanent contraction of the hand and fingers, thereby destroying the usefulness of the entire hand.

FINGERS AND TOES.

Contraction and distortion of the fingers and toes are not infrequent, as a result of disease, injuries, scalds, burns, gout, rheumatism, and paralysis; and are occasionally seen as con-



genital. Such contractions of the fingers give rise to great annoyance, destroying the usefulness of the hand, and rendering it unsightly and repulsive.

When the toes are thus effected, they impede locomotion greatly, and frequently give rise to serious mischief. These deformities can almost invariably be overcome with proper appliances.

EXPLANATION OF PLATES.

PILES.

PLATE I.—Represents the intestine cut open as high up as *a*, showing the blood vessels on the inner coat of the bowels. The larger folds in the center below are pile tumors; at *c*, the tumors cut open; *b*, sphincter muscles.

PLATE II.—*Fig. 2* is designed to represent, in life size, the lower bowel rectum, with pile tumors protruding from *b* to *c*, with engorged blood vessels above the sphincter muscles, etc., in a bad case of piles.

PLATE III.—*Fig. 1* represents the artery *o*, which conveys the blood from the heart into the lower bowel; *c* represents the vein that returns the blood; the little loops *a* and *b* represent the capillaries that connect the branches of the vein and artery.

Fig. 2 represents the artery *A*, conveying the blood to the lower bowel vein; *B* returning it, and the enlarged capillaries connecting the branches of the two. From *B* to *C* the vein is cut open, showing the decreased calibre of the vein at *G*, after being compressed for a length of time, rendering it permanently too small to convey the blood out of the enlarged sacks below as fast as thrown in through artery *A*.

Fig. 3 represents the artery *O*, conveying the blood to the lower bowel and the enlarged capillaries or pile tumors; *F* connecting it with the vein *C*. *S* is designed to represent a collection of hardened feces (contents of bowels) pressing upon the vein and decreasing its calibre, preventing the return of blood from piles *F*.

FISTULA.

There are three conditions in which Fistula in Ano may exist.

First—COMPLETE FISTULA (*Fig. 5*).—When the opening is continuous from the cavity of rectum or bowel, to the surface of the skin, so that liquids, gases, etc., escape.

Second—INTERNAL INCOMPLETE FISTULA (*Fig. 6*).—When the opening extends from the inside of the rectum into the tissues surrounding it, but not through the skin. Many cases of this kind exist, while the sufferer is unconscious of the nature of the difficulty, supposing it to be piles, or some trouble they know not what.

Third—EXTERNAL INCOMPLETE FISTULA (*Fig. 4*).—When the opening extends through the skin into the tissues around the rectum, but does not enter the bowels.

Other complications, such as pendulous tits or projections, from one-fourth to one and a half inches in length, are attendant upon Fistula. Two or more openings may appear in the skin, all communicating with the same sinus, or opening into the rectum.



Platell.



Fig. 2.

Plate II.

Fig. 1.



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.



Fig. 1.

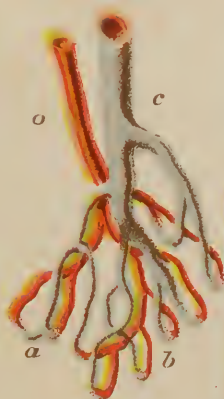


Fig. 2. Plate I



Fig. 3.



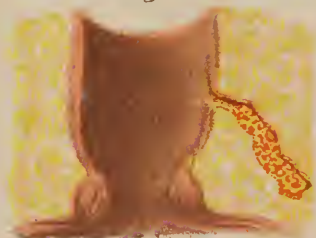
Fig. 4.



Fig. 5.



Fig. 6.



CHAPTER XIV.

DISEASES OF THE RECTUM.

THE rectum, or lower bowel, is the seat of many troublesome, annoying, and dangerous diseases. A false delicacy too often prevents early and prompt resort to proper remedies for their removal. Hence we are constantly meeting patients who have suffered months, even years, of discomfort and pain rather than submit to necessary measures for relief. Another cause that operates largely to encourage neglect is the fear of painful or dangerous surgical operations, the dread of the knife being universal. From these causes, and from inadequate and improper treatment, the number of cases of diseases of the rectum has reached a figure that should cause alarm as well as astonishment. We can not stop to deal in abstract questions, or go into an extended examination of the predisposing or exciting causes of these diseases. It will suffice our present purpose to say, in brief, that the errors and irregularities, as pointed out in chapters on "Preservation of the Health," and on "Food," will account reasonably for most, if not all, this fearful list of afflictions. Without repetition, therefore, we shall speak practically and plainly of the more common forms of disease as found in the rectum.

Piles, or hemorrhoids, are blood tumors caused by obstructed or retarded venous circulation, and undue fullness or distension of the blood vessels. These tumors may be internal or external to the sphincter or closing muscle of the bowel, and they may exist in the form of small, well defined tumors, standing out from the mucous surface of the bowel, or they may be large, aggregated, and in connection with a general thickening and engorgement of the mucous or lining membrane. They are a source of much inconvenience and pain, particularly while at stool, and immediately after. Bleeding from these tumors frequently occurs. This, with the depressing influence so uniformly felt, and the impairment of the digestive organs so sure to accompany, or

precede, the disease, is sufficient to ruin, in time, the strongest constitution.

To understand the rational treatment of piles, it is necessary first to be acquainted with the plan of the circulation of the blood, and the manner in which every part of the body is supplied with blood by the action of the heart, and also with the return of this blood to the heart again, when it has served its purpose in the process of nutrition. The blood, after being purified in the lungs, is carried from the heart by means of arteries (vessels with three coats, and not easily compressed or closed by pressure), to every part of the system. These vessels branch, divide, and sub-divide as they extend from the heart to the remote extremities and surfaces of the body, until they become very minute and very numerous, and finally connect with veins, which gather up this blood and return it to the heart. These veins are composed of thin, yielding coats, and are easily compressed. Their minute branches unite, by means of the capillaries, with the terminal branches of the arteries. Wherever an artery carries blood, there must be, close at hand, and connected with it, a vein to gather up and return this blood to the heart. (See plate III., Figures 1 and 2.)

We have seen that the coat of the artery is dense and unyielding, while the vein is thin and easily compressed. Now, if pressure is applied equally to an artery and a vein, the vein will be compressed more than the artery, and the result will be that the artery, being relatively larger than the vein, will carry more blood to a given part; hence the part will become distended and engorged, or filled with blood. This can be demonstrated by tying a string around the finger. The pressure does not compress the arteries, and make them smaller in the same proportion that it does the soft veins, hence more blood flows into the finger than flows out, and the result is, as seen, distension of blood vessels, capillaries, and, if long continued, great enlargement and tumefaction of the entire soft structures of the finger. A vessel will become more or less inflamed, and its walls thickened, if kept partially or wholly closed for a considerable time; hence from pressure the hemorrhoidal veins become too small to return the blood, while the heart continues, with the force of every pulsation or beat, aided by the force of gravity,

to drive the blood through the enlarged arteries into the distended capillaries, thus causing a constant, superabundant supply of blood in the part, and giving increased suffering and enlargement, resulting in pile tumors. The pressure that causes this changed condition of the blood vessels may arise: 1st—From the hardened, impacted fæces in constipation of the bowels. 2d—By contraction of the upper fibres of the sphincter muscle. 3d—By the muscular contraction of the intestines. 4th—By stricture of the rectum. 5th—By derangement or obstruction of the portal circulation.

Now, after a pile tumor has thus formed, the veins that return the blood, being made permanently too small, is it possible that medicine, applied to the tumor, can enlarge the contracted veins that are two inches or more above it in the bowel, and that it can not possibly touch? Has medicine any mechanical power to force out the excess of blood in the tumor, even if the contraction was removed? Certainly not. And because treatment by medicine alone must necessarily fail, shall we say there is no cure? Disappointment and death have followed this error, and thus people have been led to believe the disease incurable. But this is a great mistake. Relief may be obtained from all this pain and nervous irritation, loss of blood, wearing away of the constitution, and danger to life.

The nature of the treatment, our large experience, and the unqualified success attending it, present themselves to the gloomy victim, as if to reassure and kindle fresh hopes of speedy deliverance. Life is jeopardised by operations with the knife, hence it should not be depended upon. Dieting, cold water injections, electricity, bouges, or compression, will not cure. Painful, dangerous treatment is hurtful, and should never be employed. The true principle of treatment is to make the calibre of the arteries equal only to that of the veins. To allow no more blood to flow to the parts than the veins can carry away in the same time; to make the influx and the efflux of blood exactly the same.

In some cases it is necessary to obliterate the small artery entirely, thus cutting off the source of extra supply. The tumors will then speedily subside and disappear—and the operation need not be followed by pain, and is entirely free from danger. In other cases a partial closing of the principal trunks of the arteries

is all that is required to regulate the blood supply, and thus inaugurate the process by which the change from distention, inflammation and pain, to a natural and healthy condition, is brought about.

FISTULA IN ANO.

Fistula in ano, a discharging sinus, or ulcer, near the anus, is usually less painful, but more dangerous than piles. It begins with uneasiness, pain, or an intense itching about the anus, externally, and a little offensive discharge; or the first indication may be a small abscess, or boil, which finally discharges matter. The soreness soon subsides, but the discharge of matter continues and the sore does not heal up, or if it heals, it soon gets sore and breaks out again; and this constant drain upon the system is liable, sooner or later, to undermine the health and lead to consumption, or other fatal diseases.

Any unusual irritation or pain in, or the discharge of matter from the rectum, should receive prompt attention, while the cure is so easily effected. Even in confirmed cases of fistula, the operation is not attended with danger, besides it is simple and is free from the objections so forcibly urged by those who use the knife. It is worse than folly to attempt the treatment of either of these diseases—piles or fistula—by prescribing remedies, without having first seen and examined the case.

An idea is quite prevalent among the people that these affections can be cured by the advertised specifics of the day. Nothing could be more dangerous or fatal. The same remedy for every phase and condition, could not meet the demands of the cases in which it is promiscuously employed, even if it possessed merit. These nostrums result in disaster and disappointment to the patient. Never neglect fistula; never attempt the foolish task of trying to get well under the use of medicines prescribed by persons who are ignorant of your real condition and needs; and, above all, place yourself in the hands of those only who, by reason of their long observation and experience, are competent to give you relief in the shortest possible time, and without suffering or danger.

While piles and fistula are the more common diseases, they are by no means the only ones which effect the rectum. Indeed,

from special reasons, this seems to be a vulnerable and salient point of attack. Acute and chronic inflammations, ulcerations, eruptions, syphilitic troubles, stricture, malformations, cancer, etc., here find frequent lodgment.

A careful examination of the patient, with or without the speculum, is indispensable to a correct knowledge of the nature of the disease present, and the kind of treatment needed to arrest or cure. The rectum is so often the seat of malignant diseases, and those that become incurable by neglect, that the early symptoms of trouble should attract the notice and receive the prompt attention of the subject, and if not speedily corrected and removed, proper treatment should be early secured. Many slumber on in unconsciousness, while cancer or other threatening dangers which they mistake for piles, or some slight derangement, is surely and stealthily fastening its coils about them, and they discover, but too late, the fatal error. Taken in time, and properly treated, diseases of the rectum may be readily arrested and cured. If neglected they undermine the health, wreck the constitution, and make life a grievous burden, or terminate in a lingering death.

CHAPTER XV.

RHEUMATISM.

RHEUMATISM is a constitutional disease, attended with a peculiar irritation or inflammation, to which nearly all parts of the system are liable, but the tissues most usually involved are the fibrous, muscular, and nervous.

For convenience of description, rheumatism may be divided into four varieties, depending more or less upon the grade and the particular tissues involved :

The *Acute*, in which there is violent local inflammation, attended with constitutional disturbance and fever ;

The *Sub-acute*, in which the inflammation is less violent, and there is little or no fever ;

The *Nervous*, in which there is neither inflammation nor fever, consisting almost exclusively in irritation, and especially directed to the nervous tissues ;

The *Chronic*, characterized by long duration, and the lowest grade of inflammatory action.

Acute rheumatism is almost invariably attended with more or less constitutional disturbance and fever, developing itself, however, as a local inflammation attacking one or more of the joints, and in a majority of cases the joints of the lower extremities. There seems also to be a preference manifested for the large joints. The disease may effect one joint only, or the joints of a whole limb ; or more frequently it effects several of the limbs, and sometimes different portions of the trunk successively, and it may occasionally involve nearly the entire body. The small joints, such as the fingers and toes, are less frequently effected than the large ones, such as the knee, ankle, elbow, and wrist.

Commencing in one part, the inflammation may extend to others, as from the ankle to the knee, or from the joints of one limb to the corresponding joints of the other, then to the wrist or elbow, sometimes attacking neighboring parts, or even distant parts in succession ; sometimes deserting one part and attacking

another. In most cases the inflammation is confined to the joints and surrounding tissues. Sometimes the disease is confined to the ligaments of a joint; at others the synovial membrane may be involved, and indeed, the muscles, and investing membrane of the bone, the sheaths of tendons and nerves, and in this way a whole limb may become effected, swollen, hot and tender. The gravity of the disease is greatly increased when the lining or investing membrane, or the valves of the heart are attacked, or when the meningies or membranes of the brain, or spinal cord, are effected. Acute rheumatism is generally ushered in with violent pain, followed by heat and swelling; it may begin with a feeling of soreness or stiffness in the part, which soon amounts to positive pain, especially upon moving the part. The surface is usually reddened, but in some cases there is no change in the natural color. Very soon after the local symptoms, and sometimes before, rigors and other symptoms of approaching fever are experienced; the pulse becomes more frequent, the tongue furred, loss of appetite and occasionally headache supervene. The fever is generally active, and is proportionate in violence to the local inflammation; the surface is usually warm, though not generally so hot as in other febrile affections. Sometimes the skin is not only moist, but the surface is bathed in perspiration, which has a peculiar sour and sickening odor, but even when present does not in the least mitigate the pain or inflammation.

The urine is high colored, and generally deposits a reddish or brick dust sediment upon cooling. Perhaps there is no symptom of rheumatism so universally present as pain, which, with the fever, is usually increased toward evening and night. Atmospheric vicissitudes and change of temperature usually aggravate the symptoms.

Sub-acute rheumatism is a variety in which the constitutional symptoms are very slight, and all the symptoms much less urgent than in the acute variety, and its duration is ephemeral as compared with the chronic form. While the acute variety expresses a preference for the joints, the sub-acute most frequently effects the muscles. The local symptoms are analagous to those of the acute variety, though much less severe; the pain amounting often to only a slight aching or soreness. There is but little heat or swelling, if the seat be in the joints, but one is usually effected

at a time; a single muscle, or sets of muscles, may be involved; pain may be entirely wanting except on motion of the parts effected, as in attempting to rise up or turn in bed.

This form is much more liable to change about than either of the other varieties, on account of a strong constitutional tendency, while the local effect is feeble; hence it readily yields to causes which give the irritation another direction. This variety is intermediate between the acute and nervous. This form may effect the muscular and fibrous tissues of the scalp, or the muscles and fibrous coats of the eyes, or the muscles of the neck, under the name of *stiff* or *wry* neck; or the walls of the chest, under the name of *pleurodynia*; the muscles of the small of the back, in *lumbago*; or the parts about the hip, in *sciatica*; and it sometimes attacks the membranes of the spinal cord, under the name of spinal irritation.

Nervous rheumatism is a form unattended with fever, and is without the least sign of inflammation; it is evinced by pain or other disordered sensation, and sometimes by irregularities in the motor power. Rheumatic irritation may produce neuralgic pains in almost any part of the body. The exciting causes of this form of rheumatism are the same as that of other varieties.

Chronic rheumatism is most frequently met with in the joints; yet it sometimes attacks other tissues, such as the synovial or serous membranes, the fibrous tissues and the muscles. It may, and no doubt often does occur as an original disease, but most generally it is a consequence of the acute or sub-acute variety. It is more firmly fixed than either of the other forms. When the muscles are effected they may and often do shrink or waste away, and become shortened. There is very little, if any, fever, unless an acute attack should come on with the chronic, which sometimes happens in old cases. It is often attended with stiffness or immobility of the joints, from contraction and shortening of the muscles, thickening and rigidity of the ligaments, and sometimes from changes in the cartilages and bones, which undergo absorption from the long continued irritation and pressure caused by the constant contraction of the muscles. The joints are often distorted, and the limbs deformed by these causes; and in long continued cases the muscles may become entirely paralyzed. This form of rheumatism is sometimes associated with a gouty

condition of the system : then the different joints may be effected with deposits of urate of soda, or the bones themselves may be enlarged. While any of the joints may be thus effected, yet the small ones, such as the fingers and toes, are the most frequently involved. These nodosities increase as the disease advances; deformity takes place; the fingers are bent or pushed forwards or backwards, or to one side, impeding motion. If the large joints should be effected in this way, the poor patient would be rendered helpless indeed.

CHAPTER XVI.

PLASTIC SURGERY.

HERE is nothing more annoying and discomfoting than a mutilated and disfigured face—always exposed to the gaze of the public. With no means of hiding the deformity, the sufferer becomes the subject of remark and frequently of derision.

What can destroy the symmetry of the face more than the frightful contortions produced by scalds or burns—the cicatrix or scar, twisting and distorting the countenance into every conceivable shape?

What can be more repulsive than a face divested of that prominent feature, and useful member, the nose?

What condition of the face can be more frightful than the loss of a cheek, exposing the teeth and tongue?

How the loss of the lip by disease, or that congenital malformation, hare-lip, mars the features and detracts from the beauty of the face? And yet thousands of persons, young and old, are the unfortunate subjects of these distressing deformities, produced by calomel, cancer, catarrh, syphilis, burns, etc., or the result of congenital malformations. The great number of this class of cases in the country has induced the NATIONAL SURGICAL INSTITUTE to give special attention to plastic surgery, with a view of affording them relief, and great advance has been made in this branch of surgery in the past few years, insomuch that most of them can be rectified and all relieved. While these operations on the face are not dangerous, and, in the main, are not attended with much pain, yet to be successful they require long experience and consummate skill; hence surgeons who are only occasionally called upon to perform such operations, almost invariably fail of success.

CHAPTER XVII.

TUMORS.

VARIOUS enlargements and unnatural growths are found in the human body, which have received the name of tumors. These may be malignant, or non-malignant, hard, soft, fleshy, fatty, fibrous, brain-like, watery, cheesey, etc., etc. To give lengthy descriptions of these several varieties would result in no practical good to the general reader. To determine the nature and character of tumors, has long been considered a difficult task, even for the professional man of large experience and varied acquirements; hence it will be worse than folly for a non-professional individual having a tumor of any kind, to rely or depend upon his own judgment in the matter.

Let it alone, don't handle it, or make any application of medicine whatever, but apply at once to those, who, by reason of their experience and qualifications, are best fitted to afford you relief. Many tumors originally benign in character, have been goaded into malignancy by the injudicious treatment of meddling old women, or physicians of limited experience.

Many malignant tumors are incurable, *and all are, if neglected.* Non-malignant tumors, with timely and proper means employed, are amenable to treatment. A very large class seem to occupy medium ground, to partake somewhat of the nature of both.

It is here that the greatest good is often accomplished in arresting the degeneration, preventing the accession of malignant symptoms, and snatching the patient from a terrible fate.

Never neglect these tumors. A suspicious wart, or mole, if properly treated, may be forever removed, and thus relieve you of anxiety and fear. Subject it to irritating or exciting influences, and a metamorphosis may speedily occur; and that which was but a simple thing, scarcely worthy of your notice, so recently, may assume a fearful malignancy, sparing nothing in its destructive march.

The following cuts show tumors of the back, neck, and face,

all of which have since been successfully removed at the NATIONAL SURGICAL INSTITUTE. These cases are not selected on account of unusual size or peculiar location, yet they may be taken as fair representatives of numerous classes of tumors and enlargements, which are within the limit of safe surgical treatment.



For many years I was tortured with a wonderfully large tumor on my back, which was nearly as large round as my body. It was a heavy burden and great affliction. I was told by many physicians to remove it, it would kill me, but I resolved, over six years ago, to take the advice of the surgeons of the NATIONAL SURGICAL INSTITUTE, and had it removed. I am now perfectly well, so far as that is concerned, and there is no sign whatever of any return. The above is a correct representation of my condition before operation. The tumor weighed about forty pounds, and the doctors made a cut sixteen inches long to get it out. Words do not express my gratitude for my relief.

MARTHA DEAN,
Noblesville, Hamilton Co., Ind.

CHAPTER XVIII.

PARALYSIS.

FAR back in the early history of the world, the pathology of paralysis was shrouded in profound mystery. But feeble if any attempts were made with a view of cure, and like the leper, they who were thus afflicted were abandoned. Hence our Saviour, while on earth, selected a case of paralysis upon which to perform one of his most astounding and convincing miracles. Much of the same ignorance which prevailed then, with reference to the pathology and cure of paralysis, has followed the profession of medicine down to the present century; and notwithstanding much time had been expended, and extensive research made in trying to develop something more definite as to its nature, nothing very satisfactory was elicited.

One theory after another was promulgated, which from time to time prompted the adoption of the most barbarous practices. The poor unfortunate was made to writhe under the use of every conceivable form of counter-irritation. Every department was ransacked for fresh instruments of torture, and among the appliances brought into requisition were the moxa, the red-hot iron, the seton, irritating ointments of every description, such as tartar emetic, blisters, etc., and a host of other less severe appliances, but all in vain. The poor, unfortunate sufferer, after being almost worn out with this torture, was left with the consoling promise that he would probably out-grow it. Indeed, during this stage of medical knowledge, so futile were all the efforts to relieve that class of diseases, that one suffering from paralysis was regarded as hopelessly incurable.

But, thanks to the light of a glorious science, a new era has dawned. The science of medicine and surgery, bringing all other sciences and mechanical discoveries into a collateral relation with it, has developed truths concerning that heretofore intractable malady, which have entirely revolutionized our management and treatment of this class of unfortunates. Now, instead of the

moxa, the red hot iron, the seton, the blister, and the tartar emetic, we have more humane, rational and scientific means, embracing mechanical appliances, electricity, atmospheric pressure, together with a variety of machinery for the purpose of developing and restoring the physical powers. Very little medicine is used by us, and the most gratifying feature of the new treatment is that its success is daily attested by the thousands who have been the happy recipients of this common sense method. Enough is now known and has been demonstrated to warrant the assertion that, with proper discretion and management, most cases of paralysis, not dependent upon some incurable organic lesion, may be relieved.

This truth is now so well established, that four large institutions have been opened for the treatment of those who are thus unfortunate, and it is with confidence and pride that we point to the NATIONAL SURGICAL INSTITUTE and its branches. The projectors and founders of this noble institution have, by their untiring energy, devotion and skill, developed the most perfect system and elaborate appointments for the management and cure of paralysis, now to be found in the United States—and, indeed, it is very doubtful if the world can produce one better provided or more successful. The various causes giving rise to paralytic affections are multiplying so rapidly, in this country, at least, as to very materially increase the mortality from that source.

The following table, taken from the U. S. mortuary reports, will be found both interesting and instructive:

<i>Years.</i>		<i>Grand total, deaths from all causes.</i>	<i>Death from Paralysis.</i>
1850.	Total deaths from all causes.....	323,023	2,709
	Deaths in each 100,000.....	100,000	839
	Percentage of deaths in each 100,000.....	1,392.8	11.7
1860.	Total deaths from all causes.....	394,153	4,637
	Deaths in each 100,000	100,000	1,176
	Percentage of deaths in each 100,000.....	1,253.5	14.7
1870.	Total deaths from all causes.....	492,263	7,501
	Deaths in each 100,000.....	100,000	1,524
	Percentage of deaths in each 100,000.....	1,276.7	19.4

It will be perceived on examination of the foregoing tables, that the increase in the mortality from paralysis is very great, and the percentage has nearly doubled within twenty years. From so large an increase in the number of deaths, it is reasonable to infer that there has been a corresponding increase of the number of attacks from the disorder. Taking it for granted that such is the fact, are not those who have in charge the lives and the health of the people, loudly called upon to inquire into some of the

CAUSES.

The causes of paralysis, like all others effecting the nervous system, have been a source of much controversy among doctors of medicine for many centuries. They are no doubt multiform, and in many instances are yet so obscure as to perplex the most profound student of etiology; indeed, until within the past few years, very little comparatively was known, either of the pathology or treatment of the disease. Many theories on the subject have been advanced which in themselves looked plausible, but which, when tested by the light of experience, have fallen to the ground as wholly untenable. Autopsies and post-mortems have been made, which have as often led into error as to truth. Lesions have been taken for causes, when the causes may have produced the lesions, or the lesions may have been merely concomitants, and hence doubts and perplexity took the place of certainty and confidence.

It is therefore a matter of great gratification to the medical world, that a sufficient number of opportunities have in the past few years presented themselves to enable us to demonstrate the source and origin of most paralytic affections. For the benefit of all who may be suffering from, or threatened with this disease, we will now state that *the chief causes of paralysis are to be found in whatever tends to relax or enervate the system, or interrupt the healthy flow of nerve power from the brain and spinal cord to the organs of motion.* This will be found true, no matter how the enervation be produced, or the flow of nerve power interrupted.

Congestions of the brain and spinal cord—no matter how produced—are prolific of paralysis. Perhaps no fact has been more satisfactorily demonstrated, than that paralysis can be produced at will, by subjecting a person to an exposure of a few hours to

an atmosphere compressed so as to exert a pressure of from 45 to 50 pounds to the square inch. A rare opportunity was afforded for making such observations upon the workmen engaged in sinking the caissons under the piers of the mammoth bridge at St. Louis, Mo., also the East River bridge at New York, who were obliged to work in an atmosphere under a pressure of from 30 to 50 pounds to the square inch. Paralysis was of frequent occurrence among the laborers who worked in this compressed air.

Another important fact was verified at the same time, viz: That persons addicted to the use of alcoholic stimulants were almost wholly unable to withstand this amount of pressure, on account, no doubt, of the passive congestion already present as a result of the stimulants.

The careful student of etiology would not be long in determining the cause of these cases of paralysis, for the reasons are too obvious. The pressure being so much greater on the outside than the resistance within, the blood was forced from the whole external surface and soft parts into the cavities. Those, the walls of which are fleshy, were also much lessened in size by the pressure, while the bony and comparatively unyielding cavities within which the brain and spinal cord rests, were not diminished in their diameters, but were left vacuum like, to receive the blood thus forced out of the vessels. Congestion or effusion into the substance of the brain and spinal cord followed, and paralysis was the result. Now with these observations and demonstrable facts before us, we can readily perceive how the following causes may produce paralysis, by local or general congestions of the brain and spinal cord, or by enervating the system, or by pressure, or by otherwise interrupting the healthy flow of nerve power from the brain and spinal cord to the organs of motion, viz: [See article on atmospheric pressure.]

The inordinate use of stimulants, such as whisky, tobacco, coffee, and tea;

Sudden and overwhelming shocks to the nervous system;

Sudden transitions of temperature;

The suppression of habitual discharges;

Long continued spinal irritation;

Exhausted vitality of parents, transmitting to their children a predisposition thereto;

- Excessive physical or mental exercise, producing great prostration ;
- The long continued use of poisonous sedatives, as evidenced in lead palsy, &c. ;
- The inhalation of the poisonous fumes of metals ;
- Softening of the brain or spinal cord ;
- Atrophy, or wasting of the same ;
- Fractured or dislocated bones, by pressing upon the brain, spinal cord, or some of the nerves ;
- Diseases incident to childhood, are often the exciting causes in susceptible constitutions, such as meningital inflammations, (cerebral or spinal) ;
- Scarlet fever, measles, whooping cough, and convulsions ;
- In the careless handling of infants or children, the soft and immature nerve tissues may be so injured as to produce paralysis, although many months may intervene before it becomes apparent ;
- Hydrocephalus, or effusions upon the brain or spinal cord, by pressure ;
- The breathing of unhealthy air ;
- The eating of unwholesome food ;
- Apoplexy, syphilis, self-abuse, scrofula, and rheumatism, are not unfrequently attended with or followed by paralysis.

There is no doubt that in very susceptible persons, irritation of the peripheral extremities of nerves may produce paralysis by reflex action, as from worms, ingesta, burns, etc.

It is also highly probable that paralysis, in some instances, may be due to an abnormal condition of the terminations of nerves, which may be rendered unfit for receiving impressions, either from the external surface or the brain—by long continued pressure, by disorganization of their own tissue, by the depressing action of poisonous metals, and by prolonged *disease*. The latter is especially so in cases when the paralysis continues after the cause producing it has ceased to exist. In such cases there seems to be a want of responsive action, or the will power having been so long quiescent, is unable to enforce its commands, or exercise but partial control over the organs of motion.

This condition is more frequent in chronic cases than has been heretofore supposed. It has been often noticed, that in the treat-

ment of some chronic cases, artificial movements did more to develop a return of the will power, and were therefore more conducive to recovery than everything else. How often are such expressions heard, as, I have forgotten how to do this, or that. May it not be possible, then, that after a long lapse of time, one may forget how to bring into action certain sets of muscles, so as to produce certain motions, especially when from fatty deposits, or adhesions of the myolemma, and an indisposition to make an effort, the will power required to enforce obedience, must be much greater than usual?

The nerve centres in the human body are so peculiarly constituted as to render education necessary in developing voluntary motion. The child, unlike the inferior animals, must be taught to walk, and to do almost every other thing requiring the exercise of the will power in controlling muscular action. As it has to be learned, may it not be forgotten? From the multiplicity of causes presented, one would naturally conclude that the proximate results must be the development of a great

VARIETY

of forms of paralysis: such is the fact. These varieties depend somewhat upon the location of the lesions, and character of the causes producing them, and their nomenclature is usually derived from the facts involved in the results. Thus we have *hemiplegia*, where one-half of the body longitudinally is effected with paralysis. This form is usually produced by lesions of the brain, above the *medulla oblongata*, or upper portion of the spinal cord.

The causes most commonly producing it are, apoplectic clots, tumors of any kind pressing upon the brain, pieces of bone, embolism or softening. On account of the decussating fibers of the anterior pyramids of the *medulla*, the paralysis is exhibited upon the opposite side from the lesion. Occasionally hemiplegia may occur from lesions of the spinal cord. In such cases, the paralysis is found upon the same side with the lesion.

The next most common form of paralysis is *paraplegia*, in which one-half of the body transversely is paralyzed; usually the lower half, and frequently the lower extremities only. This form of paralysis is generally the result of injuries, or disease of some portion of the spinal cord or its membranes, or both. It is generally

ushered in by pain in the back, numbness of the feet, with or without fever. The power of voluntary motion is lessened or entirely lost. The muscles may be either relaxed or contracted; and, in many cases, the power over the bladder and rectum is diminished or completely destroyed. These are the two most common forms of paralysis.

Reflex Paralysis is a form usually produced by irritation of the peripheral extremities of a nerve, and transmitted along it to the nerve centre, overwhelming or paralyzing it; the effects being shown, of course, in the parts to which its branches are distributed.

Locomotor Ataxy.—This is a form of paralysis in which there is a want of co-ordination in the action of the muscles; hence, the gait in walking is unsteady and insecure. This want of association is sometimes felt in the arms, but more frequently and in a greater degree in the lower limbs; giddiness is a frequent attendant; in closing the eyes while standing, the patient is apt to fall down; in walking, the limbs are *jerked* forward very different from the dragging of the limbs, as witnessed in ordinary cases of partial paraplegia.

Wasting Palsy.—In this form of paralysis, a few of the muscles of one limb, or the voluntary muscles of the whole body, may waste away and become atrophied. The shoulder and the ball of the thumb, are frequently affected. The muscles of the calves of the legs, those of the small of the back, and hips, are more frequently involved. Examinations after death do not reveal any lesions of the brain or spinal cord which would give rise to it; its pathology is not well understood. The fault may be found to be in the nerve centres which regulate nutrition.

There are quite a number of other forms occasionally met with; such as hysterical, diphtheritic, mercurial, syphilitic, lead palsy, and palsy agitans; and local palsies, such as Amaurosis, or paralysis of the optic nerve; Scribner's, or writer's palsy; Cophosis, or palsy of the auditory nerve; Ageusia, or paralysis of the gustatory or nerve of taste; Anosmia, or paralysis of the olfactory or nerve of smell.

These do not require any particular consideration. But there is another form of so much importance as to require particular mention, viz:

Infantile Paralysis.—This is a disease affecting some of the nerve centres, and extending so far as to arrest nutrition, and abridge motion in the limbs. It is usually a partial paralysis affecting single muscles, or groups of muscles. Sensation is generally unimpaired. The bladder and rectum are frequently, although not always, involved. The muscles paralyzed are never rigid in this disease. No violent symptoms attend an attack, although it may come on quite suddenly. Dissipation or ill health of patients, is a frequent cause of this form of paralysis. Want of proper knowledge and attention, generally allows this form of paralysis to result in deformities of one kind or another, talipes or club foot being the most common. Probably there is no form of paralysis more amenable to treatment, if attended to in time, and judiciously and properly managed; but if left an indefinite time, it becomes very intractable, on account of fatty degeneration of the muscles involved.

After having said this much on the subject of paralysis, we come to consider what, to the patient, is of the most importance, viz: its

TREATMENT AND CURABILITY.

As has been remarked before, the profession of medicine has, from time immemorial, utterly failed to cure the disease. In the early history of medicine, when but little if anything was known respecting its pathology, it was hardly to be expected that any rational method of treatment would have been adopted, and, consequently, few if any cures were effected. But in late years, the disease has been much better understood, and of course it was fair to expect that the treatment would become more rational, and the cures more frequent.

It is a little known on all sides that many cases of paralysis are now curable, but still few cases comparatively are relieved. The reasons are obvious. While the profession has ever been ready to denounce other vices and follies of the fathers of medicine, it has clung with a pertinacity unprecedented, to their absurd practices in the treatment of paralysis. Nearly, if not all, of the same barbarous and inhuman appliances used three hundred years ago are used to-day, and are handed down through our medical schools and books as sacred relics.

The moxa, the red-hot iron, the seton, and irritating ointments

are as much in vogue now as they were then. If this line of treatment resulted in success it could be tolerated and even justified. Unhappily, however, such is not the case. It is, therefore, not to be wondered at, that, with the constant increase of causes and with no corresponding improvement in the treatment of the disease, there should be an increase in the ratio of mortality, as is shown to be the fact by the United States mortuary reports already alluded to.

It would be absurd to assume the curability of every case of paralysis, but while this is not possible, it has been demonstrated that very many cases hitherto considered incurable, are amenable to treatment and susceptible of cure. Not, of course, by such blundering methods and irrational treatment as those pointed out in the foregoing pages, but by the union of intelligent science with practical mechanics, by assisting nature instead of resisting and baffling her efforts, and by the use of wise and rational, instead of cruel and senseless, remedies.

From what has been said of the causes of paralysis, it would seem that in the majority of cases, the indications for treatment were plain. This is true in the main, yet it must not be forgotten that in many instances, the causes which operated to produce the paralysis have long since ceased to exist, and in such cases we have to deal with results only. Neither is it always easy to determine whether the paralysis is produced and continued by organic lesions, such as softening, induration, adhesions, etc. The loss of motion, and sometimes sensation, the wasted muscles, etc., may be apparent, but this may be only an effect, and must not be confounded with the cause. The causes operating to produce nearly all forms of nervous diseases, are from their very nature, frequently obscure, and paralysis is not an exception; hence, any one presuming to treat it, can not be too well informed in all matters pertaining to the disease and the history of each individual case. Theories may be well enough in writing books, but the practical management of this disease, necessary to success, must be determined by the light of experience, for theories, however plausible, are wholly unreliable unless supported by facts.

It is by the light of experience that the NATIONAL SURGICAL INSTITUTE proposes to treat this disease. More than fourteen years of careful observation and experience have developed many facts,

which point with unerring certainty to the most rational and successful method of treating paralysis, the general principles of which are as follows:

1. The limb is cold and feeble; by proper treatment the temperature can be increased and muscular strength imparted to it.
2. The blood does not circulate freely and in sufficient quantity; the size of the blood vessels should be increased, the circulation accelerated, and thus supply the limb with its full quota of nutrition.
3. There is no motion of the limb; to regain motion impart nervous force to the muscles, and by artificial motion cause molecular changes, which will excite muscular contractions.
4. There is little or no disposition to muscular contractions; to remedy this fault produce artificial contraction until the *will power* is re-established.
5. Without use, muscular power will not be regained, and the limbs will continue weak and unable to sustain the weight of the body; take the weight of the body from off them by suitable apparatus, allowing them motion free from pressure or exhaustion.
6. The limb is emaciated, and the muscles smaller; this must be overcome by systematic development, of which there is nothing more susceptible than the human body; and if it is possible in the adult, how much more is it in the growing child?
7. The blood is often impoverished; if so, it must have iron and oxygen, and other necessary constituents to make it nutritious and healthy.

SOME REASONS WHY WE SUCCEED.

We increase the size of the blood vessels, and accelerate the circulation of the blood, thus imparting a full supply of nutritive material to the muscles, thereby increasing the temperature, growth, and development of the limb.

As the limb grows and becomes properly developed in all its tissues, muscular contraction and motion returns, and adding to all this the exercise of the *power of the will*, we obtain action of the limb together with *voluntary motion*.

All these vital changes are brought about by the use of our gymnasium, machinery, and such surgico-mechanical appliances as are required in each individual case.

By the use of oxygen gas we improve the vitality of the system, with other remedial means we generate nerve force, and the result is a recovery from a paralyzed, helpless condition, to that of bodily vigor and activity.

Our treatment, though somewhat complicated, is easily understood, and the results more satisfactory, and the *cost less* than can be obtained elsewhere.

Many cases can be supplied with apparatus and machinery, and be treated at home successfully.

Our treatment is based upon the dictates of common sense, and each case is treated according to its special indications, irrespective of the old theories or notions. Our practice is to make every discovery of science minister to the restoration of our patients. We harbor no hobbies, but cure our patients, hundreds of whom now enjoy life and the use of their limbs, and are happy in their restoration.

SOME OF THE REASONS WHY THE OLD METHODS FAIL.

They fail because their treatment is directed to disease of the spine, or other nerve centers, where in reality no such disease exists.

Active remedies, such as strychnine, calomel, nux vomica, etc., do not cure, and are dangerous and useless.

Blisters, the hot iron, the moxa, and other cruel and barbarous methods, only increase the trouble and banish all hopes of a cure.

Volatile liniments, evaporating lotions, friction, and other irritating applications only aggravate and annoy the patient.

Forcing the use of weakened and paralyzed limbs, and compelling them to sustain the weight of the body without adequate strength to do so, only weakens them by the over-taxation of the muscles, and the ultimate result is a deformity and distortion of the limbs.

In the old practice, no support is used to sustain the weight of the body, no means employed to dilate the blood vessels, no blood forced into the limbs, no constant artificial heat is employed, all of which are necessary for the revitalizing of the limbs, and the restoration of muscular action and motion.

The most foolish and heartless feature of all is to advise the patient to outgrow it, assuring him that nature is a wonderful cure-all, because the doctors do not know what to do.

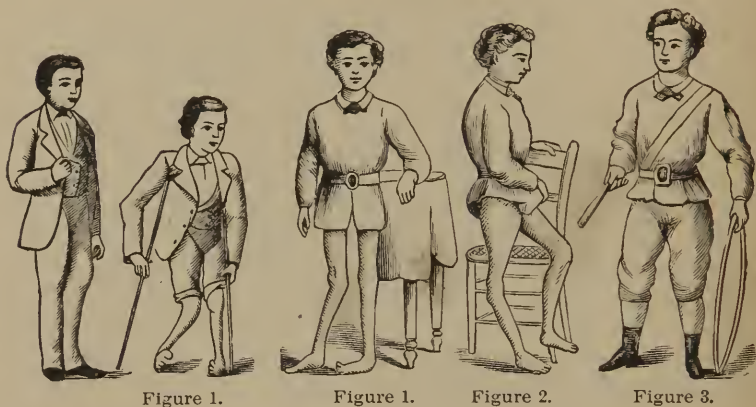


Figure 1.

Figure 1.

Figure 2.

Figure 3.

In figure 1, the muscles on the inside of the thigh and leg are relaxed, thus allowing the weight of the body and the undue contraction of the antagonistic or opposing muscles on the outside of the thigh and leg, to bend the limb in at the knee, producing a very common deformity.

In figure 2, the muscles of the right leg, on its posterior or back part, are relaxed, while those in front contract, giving rise to a backward curve. In the left leg of the same figure, the re-



Figure 4.

Figure 5.

verse is the case. The rectus muscle in front is relaxed, and the flexor muscles behind strongly contract, producing the most common of all the deformities of the knee. By relieving the

limb of the whole or a part of the weight of the body, so that the extra weight will come directly upon an adjustable brace, and then arranging the apparatus so as to overcome and equalize the undue contraction of one set of muscles, and support and strengthen those that are relaxed, a restoration and cure, as shown in figure 3, is readily made.

In figures 4 and 5, the paralysis or relaxation and weakness is in the muscles of the back part of the pelvis and thighs, while those in front strongly contract, bending the thigh forwards and towards the body, disabling the patient, and preventing walking or even standing.



Figure 6.



Figure 7.



Figure 8.

In figures 6 and 7, the same condition exists, with the additional paralysis of the muscles of the legs. Figure 8 shows paralysis of one leg only.

In these cases, all treatment by medicines, electricity, friction, hot springs, baths, etc., will be vain and fruitless, unless the proper mechanical support is applied, by which the weak muscles will be aided in their work, and the contracted ones regulated and brought into their proper condition. The result of this, the only rational and successful plan ever adopted, is seen in the illustrations given.

LETTERS AND REFERENCES—PARALYSIS.

The following is a letter from a gentleman fifty-three years old, who placed himself under our treatment in the spring of 1874:

CALVERT, TEXAS.

From the progress in improvement my arm is making under your treatment, I have no language sufficient to express my gratitude. I have been enabled to use my arm to write this letter, and can comb my hair with the arm which has been powerless to do either since the year 1848.

F. A. HILL.

DRS. ALLEN, JOHNSON & PECK:

Dear Sirs—Three years ago, the fourth day of July, our little darling was stricken with paralysis, caused by poison from green paint. After trying physician after physician, all of whom told me that she could not be cured—what a thought—that she, our only child, should be crippled for life. I could not believe it. The light of our lives, the sunshine of our home, should be deformed and crippled for life! The thought was too terrible to realize. In visiting a friend in the country, I came across one of your circulars, and determined to bring her to your institution. I came, and commenced treating her last January; and, after having her heel cords cut and her limbs straightened, she is now, the 27th day of October, nine month's time, able to walk three squares, and is perfect in form. I sincerely believe she will be entirely cured in one year, should God spare her to us. Oh! how can we feel grateful enough to the kind Providence in thus hearing of your institution. Feeling I am inadequate to express to you the gratitude I feel to you for the wonderful cure you have performed upon our darling girl, I can truthfully say, that you have performed all your circulars represent you do, and more. I found your surgeons and attending physicians to be kind to a fault, ever ready to lend a willing and patient ear to the afflicted, and ever ready to help the poor and rich alike. Feeling I can not express myself in terms strong enough to your great and glorious institution, I remain,

Yours, most gratefully,

MRS. M. L. CAREY,

Formerly of Cleveland, O., now of Indianapolis, Ind.

No. 171 Virginia Avenue.

GILBERTVILLE, BLACKHAWK CO., IOWA.

At the age of nine months, I became paralyzed in all my limbs. When nineteen years of age, I placed myself under the treatment of the NATIONAL SURGICAL INSTITUTE, and now I attend to one span of horses, and do other work.

M. A. BROCHE.

I was stricken down with paralysis when I was fifteen years old, entirely helpless in my back and lower extremities. My physicians could do me no good. The cords of my legs were so badly contracted that I could not straighten them. Under Dr. ALLEN's treatment, they have been made perfectly straight and wonderfully strengthened, so that I now get about very easily. I am well pleased with their treatment.

W. H. DEWS,

Chesterfield, Ill.

My son, from paralysis and contraction of the cords, was so deformed in his feet and legs, that he had no use of them whatever. I placed him under the treatment of the NATIONAL SURGICAL INSTITUTE, where he was rapidly straightened and strengthened, so that he can now walk and get about as well as any one.

MATHIAS McPHERSON,

Moore's Prairie, Jefferson County, Illinois.

I have a son, eight years old, who was paralyzed in infancy in his lower extremities, thus losing all use of his legs, and being rendered completely helpless. After many years endurance of this condition, I put him under the treatment of the NATIONAL SURGICAL INSTITUTE, at Indianapolis, Ind., where, I am most happy to say, his legs were made to grow and become strong, and he is now walking every where in the full enjoyment of restoration to a life of usefulness to himself and his parents, and gratitude to his benefactors.

THOMAS MCHATTON,
Nashville, Ill.

My son Ambrose, now seventeen years old, from infancy suffered from a most severe paralysis, and deformity of the legs and feet, being rendered completely helpless, and, we had long supposed, hopeless. His legs were flexed at right angles at knees, and also thrown out to one side, and were so emaciated that there was seemingly nothing but skin and bone. His ankles were also terribly deformed, and his feet likewise. We were urged to take him to the NATIONAL SURGICAL INSTITUTE, at Indianapolis, Ind. His legs, ankles, and feet have been straightened and made to grow large, strong, and well developed. He is able to walk about easily, and work upon the farm, for which I am most happy and grateful. I would also say, when he commenced treatment his mind was demented, and we feared he would soon lose it, but the treatment has restored his mind also.

GEO. W. YOUNT,
Cropper's Depot, Shelby Co., Ky.

My daughter was stricken down with paralysis at the age of two years, causing deformity of the feet, hands, and limbs. She was so utterly helpless that she could not creep or help herself in any way for more than ten years. She wrote her correspondence with a pencil held between her teeth. I tried every means within my reach, but all was of no avail. At last I took her to the NATIONAL SURGICAL INSTITUTE, and with the treatment peculiar to that Institution she began to improve promptly, and in due course of time was perfectly cured, and is now free from deformity, walks as well as other people, and is happy. No one can so fully appreciate the value of such an Institution as one who has thus been restored from a helpless, crippled condition to health and society.

GEO. MURRAY,
Linden, Mich.

I was, for seventeen years, afflicted with a badly deformed and paralyzed foot, which rendered it almost useless during that time. My foot was very much like a club foot, only a great deal worse, which made it very inconvenient for me to get around, and also very embarrassing. I had almost given up all hopes of ever being benefited, when I was directed to the great NATIONAL SURGICAL INSTITUTE, whither I at once repaired for treatment. My stay at the Institute terminated most happily indeed, for I am now walking as well as any one, and I feel that I can conscientiously commend the SURGICAL INSTITUTE to the suffering every where.

CLARA PARKER,
Marysville, Tenn.

CHAPTER XIX.

CATARRH.

CATARRH is a very common disease, and those who are afflicted with it are of no particular class, age, or sex; but it effects people in all the various walks of life. An important fact to be remembered in connection with this disorder is, that those who suffer from it rarely recover spontaneously, or without the aid of medical treatment. Moreover, when this malady is left to run its course, with no means used to check it, it will surely run into a chronic state. Comparatively few people have a perfectly healthy condition of the mucous tissues of the nose and its connecting sinuses.

This may seem to be a very surprising statement, but it is, nevertheless, too true. It is proper to state that in the use of the word *catarrh* in this connection, we mean to include the diseased condition of the mucous membrane of the nose, together with all the cavities and passages communicating with it. The disease may be acute or chronic; but it is the chronic stage of the malady that demands our particular attention.

As before stated, catarrh is an inflammation of the mucous membrane lining the nose, but a very important fact in connection with this particular disorder should be remembered, viz: having once established itself, it becomes very *aggressive*, and extends itself in every direction, wherever a particle of mucous membrane is to be found connected with that of the nose: hence, we find the eustachian tubes, the lachrymal ducts, the pharynx, the larynx, the bronchial tubes, and finally the entire structure of the lungs becomes involved. It is this particular tendency to reach out into by-ways, the minute cells, and the little crooked passages, that baffles the physician in his attempts to cure it. If a section of the diseased tissue remains untouched and uncured, the disease is quite sure to return, spreading itself over all the surfaces previously involved.

CAUSES.

Among the numerous causes, the following may be mentioned as the most common, viz :

A frequent repetition of a common cold, with undue exposure, the inhalation of the dust of mills, manufactories, chemical laboratories, stone cutting, etc. It is a sequel to measles, diphtheria, scarlet fever, and whooping cough. A prolific cause which should be mentioned is the syphilitic taint. If the disease exists as the result of this cause, the demand for prompt and positive treatment is imperative; for if the disease is neglected under such circumstances, results follow that are fearful.

SYMPTOMS.

After having described a disease which presents so many formidable features, it becomes a matter of no small moment to know something of the symptoms which attend it, and indicate the special disease of which we speak.

The first symptoms are only those which usually attend a common cold in the head: if, however, these symptoms do not readily subside by the use of the ordinary means for the cure of a common cold, and if the mucous membrane of the nose becomes thickened and congested, discharging a secretion of thick, unhealthy mucous, or even tinged with a little blood, it will be evidence that the patient has something more with which to contend than a common cold: and if the disease is not promptly checked at this stage of it, all the phenomena of the trouble will become more and more aggravated, and the *stage of ulceration* will soon follow. This stage is indicated by soreness of the inside of the nose, with muco-purulent discharges, and scales or scabs of semi-dried bloody mucous and pus. At the same time the upper and back part of the throat will be involved, causing a good deal of hawking and expectorating of a tough, gluey mucous. The disease, if unchecked, will go on extending and involving one part after another, as mentioned hereafter, until all the mucous membranes connected with the air passages of the lungs become effected, impairing the general health to such a degree as to make life a burden, until death relieves the sufferer.

RESULTS OF CATARRH.

Some of the serious results of catarrh should be considered for the purpose of showing the importance of giving proper attention to its treatment and cure:

1st. *Loss of Smell*.—All persons value this important, special sense, and the loss of it is a *calamity* of too serious a nature to be lightly passed by. The process by which this special sense is destroyed is as follows: The disease, when neglected in its treatment, continues on into the chronic and ulcerative stage, and in process of time the ulceration reaches the turbinated portions of the ethmoid bone: it is this part of that important bone that forms the support to the cells of the nose upon which the olfactory nerve, or the nerve of smell, is spread out. When the disease reaches this stage, the patient's condition is really pitiable, for two reasons, viz: First, the sense of smell is destroyed: and second, the odor exhaled with every breath is so offensive as to deprive the individual of the comforts of society and personal friends.

2nd. *Partial Deafness*.—The loss of hearing often occurs as one of the results of catarrh, and is caused by the closing up of the eustachian tubes, or little canals leading from the upper and back part of the throat to the internal ear.

3rd. *Impaired Eyesight* is caused by the closing up of the lachrymal ducts, and an inflammation of the membranes of the eye.

4th. *Pharyngitis*, or disease of the mucous membrane, and glands of upper and back part of the throat. A multiplicity of troubles are to be found in this region, as the result of catarrh: First, there will be an enlargement and an elongation of the uvula or pendulous palate. Second, a chronic enlargement of the tonsils, resulting in frequent attacks of quinsy. Third, a diseased condition of the little glands or follicles of the throat, which become enlarged, and exude a gluey, tough, tenacious matter, causing much irritation, coughing, hacking, and the expectorating of the unhealthy exudation on rising in the morning. This condition impairs the taste and appetite. Inflammation of the pharynx often extends downward to the stomach, producing a low form of gastric irritation, with dyspepsia.

5th. *Laryngitis*.—This serious disease is perhaps one of the most common results of catarrh. Clergymen and other public

speakers are the most frequent sufferers from this affection. This is the malady that is so common, and known by the name of "minister's sore throat." Thousands of public speakers, whose success in life depends on the use of their voice, are the victims of this fearful malady. The same may be said of those whose profession is that of vocal music. How many such have started out in life with high hopes and joyous prospects, only to be crushed and disappointed by this fell destroyer of their success and happiness. Uncured, the disease travels downwards, involving the mucous membrane of the trachea and bronchial tubes to their minute ramifications, finally ending in consumption and death.

TREATMENT.

To treat nasal catarrh successfully, it is necessary to understand the anatomy of the parts diseased. An examination of the *plate* will give some idea of the extent of the surface and tissues involved. All the cavities from the frontal sinuses, Nos. 3 and 4, down to, and including the trachea or windpipe, and esophagus, Nos. 12 and 13, are lined and covered with mucous membrane, the tissue that is diseased in catarrh. Besides the points indicated and to be seen on the plate, there are numerous little passages, cavities and cells involved which can not be shown on such a plate. After giving this plate a little study, it will not be very difficult to understand why the disease can not be cured by gargles and snuffing medicines into the nose. To treat the disease successfully, remedies must be brought into contact with all the inflamed parts, including every little canal, cell and sinus. Our method of *rational treatment*, enables us to offer *relief and cure* to all who will avail themselves of it, and when it is understood that we include those formidable diseases, *clergyman's sore throat* and *bronchitis*, under the head of catarrh, and treat them accordingly with success, it will be concluded that we are accomplishing a great and good work for suffering humanity.

CHAPTER XX.

CLUB FEET.

MUCH time and money has been expended in developing theories for the restoration of club feet. Surgical talent has been employed in this work for hundreds of years, because the rules of the profession do not forbid its members from taking patents on books, which contain the results of their investigations, and selling the same for profit; but, if one of these men invents a useful apparatus for the correction of a deformity, he is allowed neither protection nor reward for his time, genius, and money. Hence, if he be of an inventive turn of mind, other fields of usefulness are sought, leaving the crippled and deformed to live on and suffer on without relief.

In all industries, and scientific avocations as well, some hope of reward has been held out to the inventor, thus affording more substantial means for daily bread for his family than empty fame. If the farmer, with a patent drill or reaper, can save time, labor and expense for those who use them, who is stupid or silly enough to say that the inventor should not be paid for his invention and allowed to advertise his machine for sale? In the year 1781, Scarpa devised an apparatus, which, in some cases, made decided improvement in the feet. Stromyer afterward achieved some success in the treatment of this deformity. Occasional reported cures kept alive the hope of relief, while the torture and cruelties inflicted upon this class of patients led them to incredulity and despair.

Our conceptions of right, and of justice to humanity, prompts our present course; and we feel that, although a few physicians may differ honestly from us in regard to advertising our inventions and improvements and facilities for the treatment and cure of cripples, yet their manifest benefit is so great and their success so much in advance of our most sanguine expectations, that we feel inclined to continue to trust the guidance of our higher sense of duty. It is gratifying to us, however, to know that so

many medical men of the present day, who understand the theory of the treatment of such cases, tell their patients at once, and frankly, that they have not the apparatus and other facilities necessary to make perfect feet, and have no desire to inflict pain or impose expense, to result only in disappointment and failure. Hence, they recommend and send these cases to the Institute for treatment. In the full consciousness of our ability to perform faithfully and satisfactorily what is promised, we make the following plain statements:

Club, reel or crooked feet can be made as perfect in appearance and use, as though no deformity had ever existed. Those who are unacquainted with our methods of treating these cases may be disposed to doubt this, yet truth is a strong foundation, and upon it we base all our statements. We have hundreds of living, happy witnesses, whose feet were crooked, deformed and useless, now rejoicing, with feet as perfect in shape and as useful as though no trouble had ever existed. We effect a cure in much less time than that occupied in making a painful failure by the old method, while our plan is almost free from pain. The old plan being radically wrong, must be painful, and fail to give satisfaction, no matter how skillful or attentive the physician or surgeon, or how well padded and carefully applied the apparatus may be.

Our treatment, when concluded, leaves no tendency of the toes to turn in, or of the foot to roll over, or any lump on the outside, or an unusual arch or kink, as in the old plans. Walking, after the completion of the first stage, facilitates the treatment instead of retarding it; the weight of the body is made a power to correct the shape of the foot.

In many cases no surgical operation is required; but, should it be necessary, it is so simple as not to shed a drop of blood, or cause any swelling, pain or soreness afterward. The treatment does not in any way affect the health, cause the loss of sleep, or of a meal; the skin does not become chafed or sore by the pressure of the apparatus, if the directions are followed.

The deformity will not return after the treatment is concluded, because the joints are perfect; therefore, the gait is natural, and all hobbling is removed. Each apparatus is manufactured in the Institute machine shops, under the immediate supervision of the surgeon who orders it, and by whom it is to be fitted and applied.

All the appliances used are the invention of Dr. Allen, and by him patented; therefore, they are made by no one else in the United States. They are light, simple, easy, and the only common sense apparatus ever invented for crooked feet. This will be readily admitted on first examination. We do not make apparatus for sale, neither do we charge exorbitant fees for professional services; but we furnish all needed apparatus, and give all necessary treatment, for the relief of deformity, and the making of perfect feet.

After remaining a short time at the INSTITUTE, most patients return home to follow up their treatment according to our instructions.

The old method of trying to straighten crooked feet has failed, because it does not regard the foot as a machine, having a framework of bones, with tendons, pulleys, fastenings, muscles, &c.

Not only this, but it attempts to do two diametrically opposite things at the same time, and so does nothing.

By rounding off the angles of the articular surfaces, the shape of the bones and of the foot are made worse. The foot will roll, the toes turn in, and the heel slip and crawl up, in spite of the apparatus. Should partial success attend the effort, the toes will still turn in at every step; and, as the body moves forward so that its weight comes upon them, they rotate in the direction which is the easiest, and that, of course, is toward the old position of deformity; hence, the trouble instead of being gradually overcome, and the parts carried in the direction of their natural place, is only increased and confirmed by attempting to walk.

Walking, under these circumstances also tends to bend and wear out the apparatus, so that it soon needs repairs, or to be replaced by new. Again, the surgeon who treats the case does not invent or see to the making of the mechanical appliances, but trusts this to instrument makers who have no special responsibility in the case, other than to make and deliver them, or repair them as needed, or make new ones, each time charging and receiving the fee; and this continues as long as the patient is able and willing to pay.

The surgeon who operates, charges his regular fee, and additional pay for the general care of the case.

After this, the patient visits the instrument maker, gets his apparatus, pays the charges and goes his way.

When he returns, with matters rather worse than before, another operation, another fee demanded, another visit to the instrument maker, with an additional charge; and home he goes, to repeat the performance as often as his inclination or his purse will allow.

No one can be eminently successful in any business unless it be made a special study and practice, nor can he succeed without facilities for its prosecution.

Physicians, in general practice, although they may be worthy, honorable, scientific and successful; yet their minds must of necessity be so pre-occupied and engrossed with the great problem of life and death in the treatment of acute diseases, fevers and other maladies, as to leave no time or opportunity for the successful study and practice of orthopedic surgery, which alone requires time, labor and capital to insure success. •

The greatest disappointments are realized from taking measures for apparatus, and sending them to some instrument maker for "club foot shoes," or other apparatus for straightening crooked feet. The measure is taken by one not familiar with such work; and, as it is a critical and delicate matter, it is no wonder mistakes are made, and failure to get a cure ensues. When the apparatus comes, the proper application of it, even if it were possible that it was of any value, requires more than mere theory can suggest.

Actual and long continued practice, in addition to anatomical, theoretical and physiological knowledge, is the only avenue through which this indispensable experience is obtained. Should the apparatus appear to fit—one, two, three or more changes will be necessary to insure success. We often make six or eight changes before the work is properly done. No two feet, even belonging to the same person, are exactly alike; hence the plan, as adopted by makers of orthopedic apparatus, of keeping them on hand ready made, is as foolish and fruitless as to attempt the melting of icebergs with moonbeams.

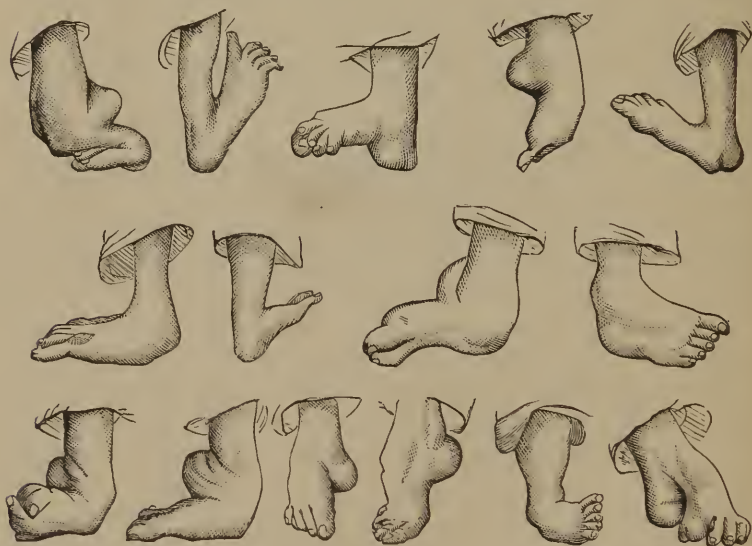
The appliance must be designed for the particular foot to be treated.

If an operation is needed, it should be performed only after the apparatus is made and in readiness, that the cords may not unite too soon, and that the correct position may be had.

The correct pressure, bearings, joints, springs, ratchets and counter-bearings may be inspected; and full directions given by the surgeon and understood by the patient, that neither too much haste nor too little progress be made, avoiding both extremes, and pushing steadily, smoothly, easily and certainly along, to the final triumph that crowns correct and faithful efforts.

It must be made from actual measurement, and thoroughly adapted to the wants of the case; otherwise, injury instead of benefit will follow its use.

The following cuts represent the common forms of club feet. Many complications exist, as the result of paralysis, accident, improper apparatus, and unnecessary surgical operations, which are not shown in these figures.



These cuts represent many of the varieties of club feet, of which we have treated thousands successfully by our new method; and the feet after treatment look perfect, and are as useful as if they had never been deformed.

Our new method of straightening this class of deformities is practiced nowhere else in the world, so far as we can learn. It is quicker and easier than any other mode of treatment, and makes perfect cures.

Club feet, or crooked feet, are so varied in shape and condition, that an endless variety of mechanical appliances is needed for their cure; and, as with appliances for many other deformities, there is not room to display *them* alone in this circular. Our new



method of treating these affections obviates all the pain, chafing, and long, tedious uncertainties of the old method. You may order a shoe made for a foot by a shoemaker, and if it does not exactly fit, no harm is done; but a bad fit in treating crooked feet is ruinous; and no physician, unless constantly treating such cases, can successfully treat them. Mrs. Strubel, of Ohio, had her boy treated by her family physician, and the boy's toes all sloughed off, making a horrible foot—all from improper pressure. Mr. Denison, of Litchfield, Ohio, had his son treated at Cleveland, Ohio, and his feet were made terrible, with large sloughing sores, and not cured. Both these cases have since been cured at the Institute. WRITE, PATIENTS, FOR PARTICULARS. Many cases are made infinitely worse by bad treatment. They are the easiest cases to cure, and the cure is positive with proper treatment.

There is, perhaps, no malady that ever came under the treatment of the surgeon in which more can be achieved, or greater

benefits confidently expected, than in club feet; and there is no longer any excuse for parents to allow a child to grow up in this humiliating and deformed condition. Humanity and justice demand better things. Never wait till the child is OLDER, for every day increases the time required to cure it.

It has been formerly considered useless to undertake the straightening of crooked feet unless the patient was young; but we are straightening hundreds of cases after maturity, some as old as 35 years, making perfectly satisfactory feet.

From the thousands of cases treated, we have a *carte blanche*; but for the present we refer to Hezekiah Hanshaw, of Palmyra, Ill., whose boy was treated for a year by a physician of Jacksonville, Ill., without benefit; David Reynolds, Marshall, Ill.; Frank Huston, Marshall, Ill.; David Adams, Neoga, Ill.; Garret Osborn, Dakota City, Nebraska; Wm. B. Griswold, Mankato, Minn.; D. A. Squiers, Decatur, Mich.; George Sanford, Trenton, Ark.; Wm. J. Clarke, Paola, Miami Co., Kas.; Lawrence W. Baker, Greenford, Mahoning Co., O.; A. J. Skelton, Roaring Spring, Christian Co., Ky.; W. B. Smith, Kaysville, Utah; Henry G. Pittinger, West Windsor, O.; Frank Shults, Zanesville, O.

Besides these, we will furnish as many more as desired, on application.

BAD CASE OF CLUB FEET.

I can say to you that my boy is greatly relieved of his deformity by your treatment. He can now walk flat-footed; but for your treatment he would have continued to walk on his ankle-joint, with the bottom of his foot turned up. I have been entirely satisfied with the relief afforded to my boy. I would be proud to see your institution in Georgia, and I am confident that there are many afflicted and deformed persons here who would like to place themselves under your care.

BRYAN BATEMAN,

Byron, Houston County, Ga.

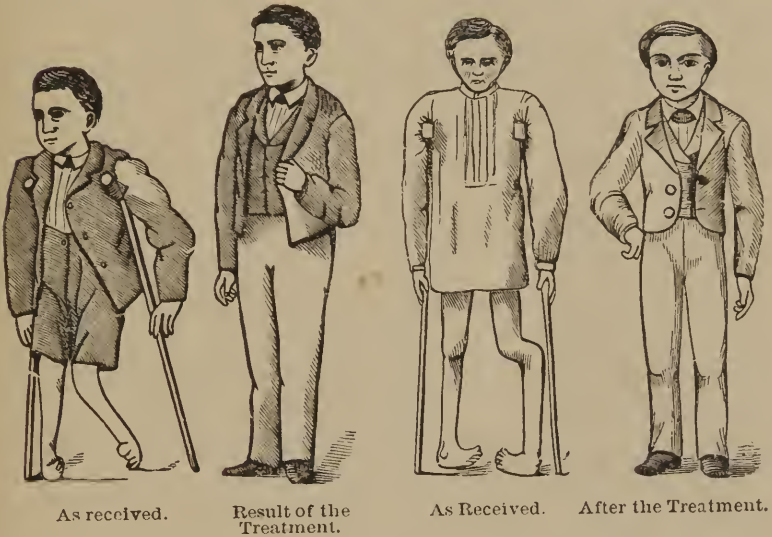
The following was one of the worst cases of club feet in California, and between 30 and 35 years old. The physicians of San Francisco wanted to perform a terrible and very dangerous operation, by cutting a V shaped piece from the outside of the feet, in order to draw them around straight. The cure has been very easily performed without any such hazardous operation.

COLUMBIA, CAL., September 16th, 1873.

DR. H. R. ALLEN:—Yours of the 5th inst. is just received. My feet are still improving. * * * I am satisfied that a few weeks longer will make them both well, * * * and I shall be able to go back to San Francisco in about four weeks; and when I do, I shall let the people know what you have done for me, * * * in hopes to help some one who may be afflicted, and in some measure to benefit you for the kindness and liberality with which you have treated my case. People in this vicinity are much surprised at the effect of your treatment, and hardly a day passes but some one comes to see the "Miracle." There are many cases who will go to San Francisco if you should visit that city again.

Yours, very respectfully,

J. C. HOLMES.



Knock knees, bow legs and all kinds of deformities speedily cured without confining patient to bed.

CHAPTER XXI.

SPINAL AFFECTIONS.

THE SPINAL COLUMN (plate 4, figure 1) is composed of twenty-four bones or vertebra, articulating with each other.

These bones are convex or circular in front, and flat upon their upper and lower surfaces. They have a projection at each side and one behind, called processes. Each also has a large opening communicating with its fellow above and below, making the opening for the spinal cord. This cord is continuous, with the brain at the top, and extends the whole length of the column. The same membranes that cover the brain extend down to and inclose the cord. This cord gives off a pair of nerves between each of the vertebra, to supply the limbs, all of the vital organs, muscles, etc.

The muscles of the neck, back, chest and abdomen all contribute more or less to the support of the spinal column, and maintain it in the erect position. They comprise seventy-seven pairs, so arranged as to act in harmony, not only in keeping the body in its natural, erect position, but in producing its varied and complicated movements. Extending from the trunk to the arms, and from the pelvis (hips and loins) to the thighs and legs, we find thirty-one additional pairs, which in many cases are concerned in the production of spinal distortions, making a total of one hundred and eight pairs of muscles—the anatomy, physiology, action and mechanism of which should be well understood, in order to adapt proper appliances and treatment.

In all spinal affections resulting in deformity, the bones undergo a change in shape, the spine becoming bent short, or at an acute angle, thus narrowing the canal and pressing on the cord. To illustrate this, take a lead or rubber pipe and bend it; the more it is bent, the narrower the cavity or caliber will be, and if bent very short it is closed entirely. In this manner the cord becomes so much compressed, that paralysis of the parts below often follows, with emaciation or arrested growth. In caries of





the bodies of the vertebra, called angular curvation, and Pott's disease, the front or articulating edges become soft and yielding as the disease progresses, until, utterly unable to sustain the usual weight which comes upon them, they flatten, grow thin and wedge-shaped, or break down into the abscess, and allow the spine to bend forward, as shown in figures 2, 3 and 4, of plate IV.

If the disease be not arrested by the early and judicious use of suitable apparatus and proper treatment, matter (pus and broken-down tissues) collects at the point diseased, and sooner or later breaks at some place on the body or legs below, thus adding a new source of danger and debility, as these abscesses rarely heal. For reasons, mechanical as well as physiological, which are susceptible of easy demonstration, cures do not occur without suitable treatment.

The body, from disease of bone, or debility of muscle, or both, is not capable of self-support. Can anything be more reasonable and self-evident than the fact, that it needs outside mechanical

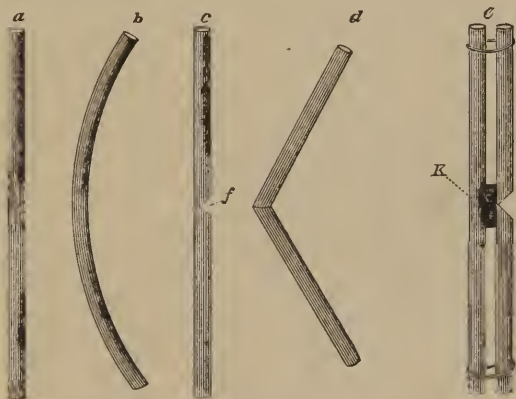


FIGURE 1.

support to maintain it in its natural position? Then why so foolishly or criminally withhold the means of relief? Proper support is always pleasant and grateful to the patient. Children unable to talk will not permit our apparatus to be taken off until the back is able to support itself without injury. The body of a child, with caries of the back, will grow, even though it be but slowly; and, if the needed support is withheld, it must grow out of shape. Thus too often is the inherent power of growth sub-

verted, and made a terrible lever in the production of deformity. Of course, growth implies increase of weight as well as in size. How this weight acts to increase the deformity and add to the pain and danger of the disease, may be readily seen from the accompanying cuts and explanations.

Suppose *a*, in figure 1, to represent a straight back or stick. Now, while straight it will sustain a great weight; but, if the weight is great enough to bend it, it will bend throughout the entire length, as seen at *b*. But suppose a notch is cut, as shown at *f* and *c*; it will then represent the condition of the spine when the vertebra are made wedge-shaped by disease, and a part gone. Now, if weight is put on this, it bends at an acute angle, as seen at *d*, figure 1, and 280, figure 2. Now, the only way this spine can be restored is, first to apply a firm support or brace, extending from one end of the spine to the other, pressing firmly on each side of the spine at the diseased part, fastening the apparatus at the upper and lower end of the spine, as seen at *e* and figure 1. Now, if the spine is bent, it will describe the original curve *b*, as seen at *g*.

Now, in order to show the absurdity of a treatment without a proper apparatus, suppose the defect to be at the centre of the spine, *a—b*, figure 2, in a child that will weigh fifty pounds. One-half of the weight will be above the disease, *a—b*. The upright lines, *m*, *a*, show where the weight would be if the spine were straight—half of the weight resting on each side of the vertebra, making ten (10) pounds on each side. Even this should never be allowed where the bones are diseased; but this pressure is nothing compared to the facts in such cases. For instance, suppose the distance from the disease to the head be twenty-one inches; that the width of the vertebra, from *a* to *b*, is one and a half inches; that the weight, as before stated, is twenty pounds; now, any scholar can make a calculation. We have a line, *a—n*, twenty-one

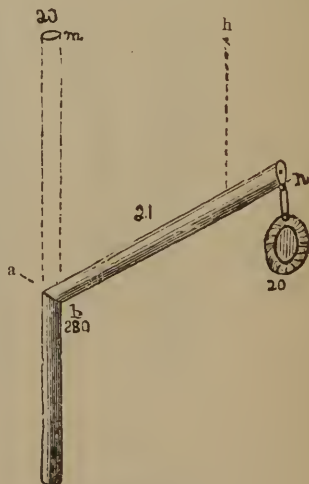


FIGURE 2.

FIGURE 2. For instance, suppose the distance from the disease to the head be twenty-one inches; that the width of the vertebra, from *a* to *b*, is one and a half inches; that the weight, as before stated, is twenty pounds; now, any scholar can make a calculation. We have a line, *a—n*, twenty-one

inches long, distance from *a* to *b* (or width of vertebra) one and a half inches; weight on lever, *a*—*n*, twenty pounds; pressure, then, at *b* is 280 pounds, instead of ten, as it ought to be in health; and this weight, too, pressing the decomposing and ulcerating bones together, causing rapid absorption and deformity, as seen by figures 2, 3 and 4, plate IV. Now, is there any mechanical power in any blister, moxa or medicine that will lift 280 pounds, when applied to the skin, making a galling sore, to exhaust the already enfeebled system? Oh, when will men stop and think, and let reason rule, and not travel a life-time in a treadmill?

As the disease progresses, the sufferer becomes emaciated—suffering, if not death, even more; and, at last, unless rationally treated, becomes a poor, dejected, abandoned and unhappy cripple for life. The barbarous and irrational treatment of the moxa, or the red-hot iron; or the modest, but torturing method of blisters to the spine; or even the more humane, but equally useless, treatment with spinal apparatus, with crutches supporting the arms and resting on the hips, still leaves the poor sufferer to go on in misery, pain or death, with a most pitiable deformity, if life is spared.

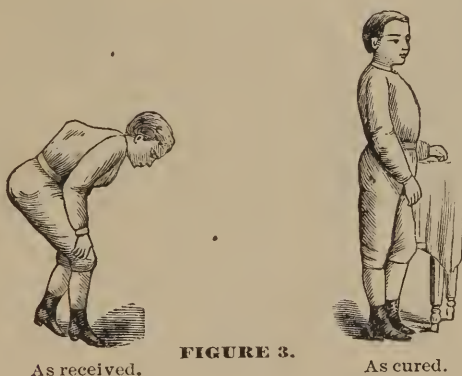


FIGURE 3.

As received.

As cured.

The symptoms of antero-posterior curvature of the spine (with caries of the bones) forming a lump upon the back, are so likely to be mistaken by the inexperienced for other diseases, that hundreds of poor sufferers are allowed to become deformed for life before the real danger is detected.

The following are some of the early symptoms: The patient, while able to get about as usual, is seized occasionally with pain in the stomach or bowels, sometimes constant for days, or perhaps only momentarily; a hacking cough, difficulty of breathing, pain in the legs, lassitude, sometimes loss of appetite and flesh; laying the hands upon tables, chairs, etc., as they are passed, and leaning upon some support as much as possible. Some of these symptoms occur; but soon a cautious gait is observed, the elbows thrown back, chest protruded, the body kept straight if possible—will kneel with one knee, or squat instead of stooping,



to pick up anything from the floor. If the curvature is going to come high up, or above the shoulders, the hand is found supporting the chin or head; if lower down, the hands are on the knees. As the case progresses, the suffering increases, and locomotion is more impeded. Finally, a slight elevation is seen upon the spine. Even then many cases are heartlessly neglected, being told it is nothing—will outgrow it. The pains, not always being in the back, mislead those ignorant of their true meaning. Deformity ensues; and, when the health fails, locomotion is nearly

lost, and the struggle for life half over, danger begins to be feared, weeks or months after the most vigorous treatment should have been adopted.

In this manner many thousands of children are mistreated or neglected, and the precious time which should be employed in rational treatment for spinal disease is frittered away in foolish and damaging efforts to destroy, with powerful drugs, imaginary worms, or cure supposed disease of the stomach and bowels.

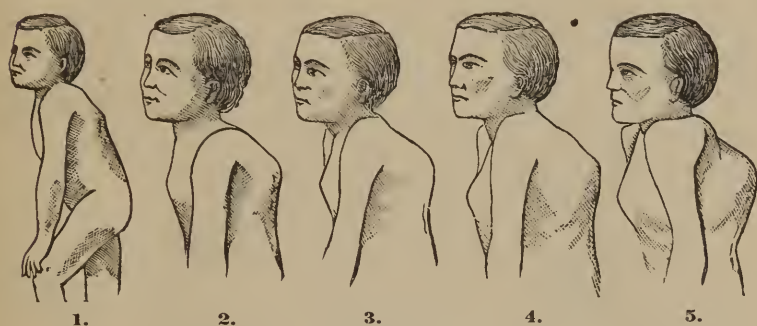


FIGURE 5.

Figures 1, 2, 3, 4 and 5 of this cut illustrate various stages of Pott's disease, from the first appearance of the small lump or prominence on the back, as shown in No. 1, to the hopeless deformity of No. 5.

This deformity being produced by contraction of muscles on one side and partial paralysis on the other, with a soft condition of the bones, it necessarily grows worse more rapidly as the body becomes heavier and larger. Hence, a case never existed where nature has produced a cure, or the patient outgrew it. If the case is neglected, the vital organs suffer from compression by distortion of the body, and serious diseases of the lungs, liver, heart or other vital organs supervene. Should the case escape death, a life of deformity is the best that can be hoped for, unless a proper mechanical and medicinal treatment is employed.

We have made the treatment of this class of diseases a special study for years, and are happy to state the result has been most gratifying; and we can now say to the multitude who were deemed heretofore hopelessly lost, that a cure can be made, the

deformity prevented, and spine restored, provided the disease has not existed too long.

The little boy, as shown in this cut, figure 6, when taken to the SURGICAL INSTITUTE by his mother for treatment, was so reduced and his health so much broken, that he was carried and nursed upon a pillow. His case, it was feared by all, was hopeless, and his mother was so informed. Nevertheless, he continued steadily to improve; and, although the deformity is not entirely removed, the lump has grown smaller and smaller, and his health has improved, until he is to-day a bright, smart and useful boy.



FIGURE 6.



Before treatment.

FIGURE 7.

Cured.

The appliances used are varied, and must be adapted to the wants and needs of each case, in order to be successful. They are not, like the bungling and imperfect appliances of the shops in our cities, sold by mere brace-makers—instruments of torture to the patients who wear them. On the contrary, they act upon correct and scientific principles, bring the body back to its natural position, relieve the diseased and paralyzed parts of the weight which they can not support; and thus, with other proper treat-

ment, restoring symmetry and motion where deformity and paralysis so recently existed.

The symptoms of lateral curvature in the earlier stages are often quite obscure. Among those first noticed is the loss of vitality; debility, nervousness; loss of appetite, flesh, and strength. One shoulder-blade seems a little larger and more

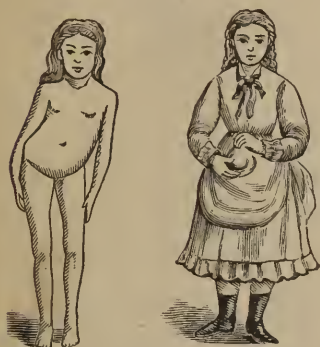


FIGURE 8.

As received.

As cured.



FIGURE 9.

As received.

Dismissed, with
the Disease and
Deformity en-
tirely cured.

prominent than the other. If a girl or young lady (and the majority of cases are), it will be noticed on fitting the clothing that one side is longer than the other.



FIGURE 10.

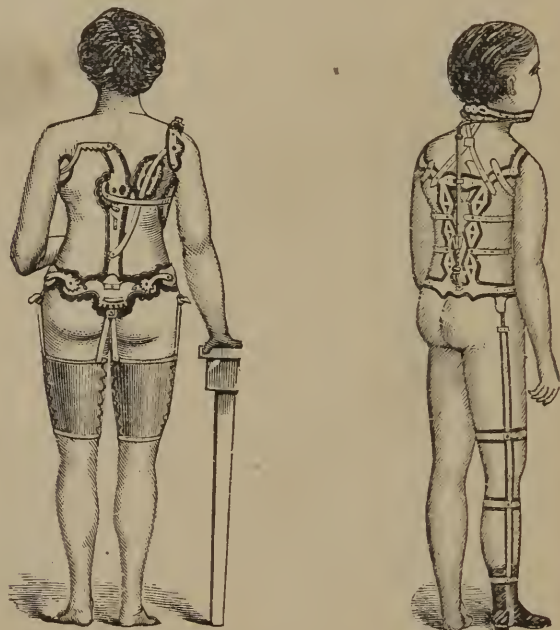


FIGURE 11.

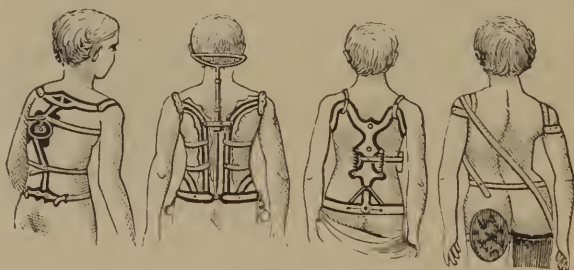
Figure 10 represents a case of lateral curvature of the spine, showing the condition when received by us for treatment.

Figure 11, same case when discharged from the Institute.

The treatment of curvature of the spine is easy, rational and successful, when properly understood and conducted; and no child need grow up with a deformed spine if timely and properly treated, thus saving untold pain, sad deformity, blighted hopes, and a ruined child.

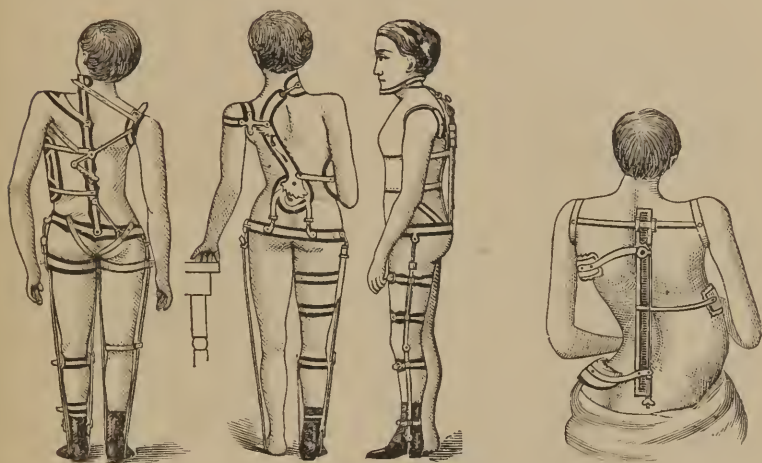


These figures represent a few of the great number of appliances and apparatus for affections of the spine. There are

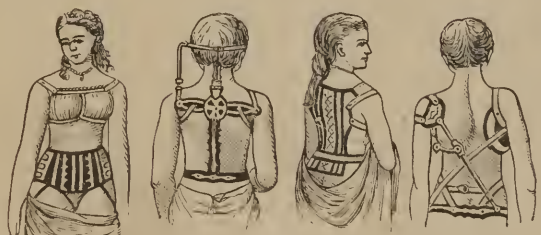


scarcely two cases requiring the same kind of support, and it requires a great amount of ingenuity to adapt just the right appli-

ance for each case; and no case can be fitted without visiting the factory where they are made, as many changes in shape must be made before justice can be done the case. Hence the folly of or-



dering a brace by measurement being sent. It is only throwing away money, and allowing the deformity and disease to progress unchecked.



We give below two extracts from letters received from patients who have been treated by the NATIONAL SURGICAL INSTITUTE for disease of the spine :

"I was born with curvature of the spine. In my childhood it could hardly be noticed, but at the age of twelve it grew worse, and the older I became the larger it grew. All treatment was of no avail, until I applied to the NATIONAL SURGICAL INSTITUTE, at Indianapolis, Ind., when the disease was instantly checked. When I first went to the Institute, my spine was curved in the shape of the letter S, but not quite as much. When I raised the right arm, the shoulder-blade projected

out so far that I could lay my hand on the inside of it. Since my treatment it has pushed back into its old place. The lower part of the spine was bent to the left, pushing the ribs upward. I also had a wry-neck, the head bending to the left. All previous treatment was of no avail—made me even worse, if anything. I consulted our village and city physicians, wore their braces, and at the same time was pronounced incurable. While residing at Milwaukee, a gentleman recommended a prominent New York physician, had a brace made and sent me, which did me no good whatever, except giving me a taste for two years of torture, something like the thumb-screw of former ages. I am now almost cured; my spine is nearly straight, my right shoulder as high as the left, and my wry-neck among the things that were.

KITTIE A. SCHNACKE, Waukesha, Wis.

I placed myself under treatment at the NATIONAL SURGICAL INSTITUTE for diseases of the spine, and am now able to do as good a day's work as any one; while for two years previous to being treated at the Institute, I was utterly unable to do anything.

M. L. LANTZ, Westminster, Md.



Plate II.

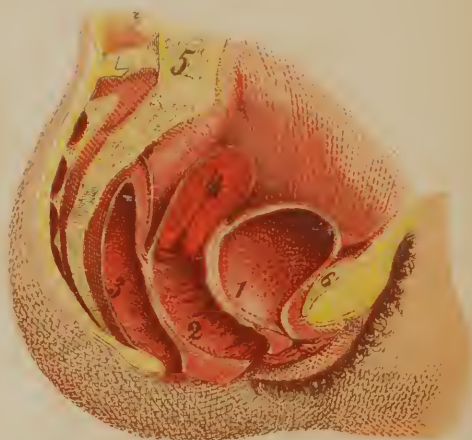


Plate III.

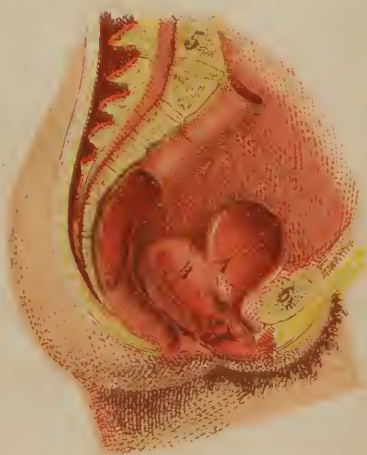


Plate IV.



Fig. 1



Fig. 2



Fig. 3





Plate V.

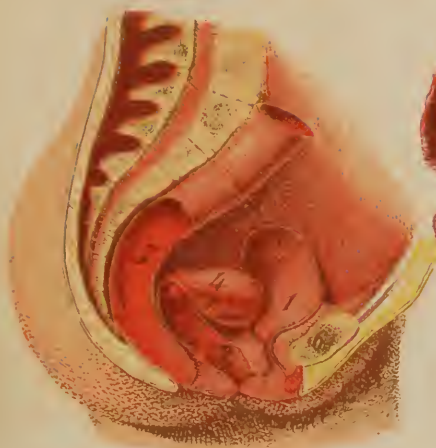


Plate VI.



Plate VII.



Plate VIII.



CHAPTER XXII.

FEMALE DISEASES.

IT IS not without feelings of delicacy that we make the following plain statements and explanations in regard to these common ills, but the work is intended only for the perusal of those whose minds and bodies are tortured by such diseases, and who have in vain sought relief at the hands of those to whom they are accustomed to appeal. We are aware that heartless itinerants and pretenders, destitute of reputation and business at home, are daily endeavoring, by means of reckless advertisements, to entrap and victimize the anxious and perhaps too credulous sufferer; but we trust that such a thorough investigation of our standing and ability will be made, as shall satisfy all that we engage in no such ignoble traffic in human happiness and human life. Had we not the most thorough preparation, the most perfect and complete, mechanical appliances, with long experience in the treatment of such cases, we should be unwilling to assume this responsibility. Few if any physicians in private practice can spare the time or make the necessary outlay in order to treat with the highest degree of success the varied forms of disease which we are daily observing and treating. Many of these cases require frequent attention in the way of dressing, application of medicines, supporters, instruments, etc. For this purpose, and to have patients constantly under the best conditions for recovery, we employ competent and experienced lady assistants, whose duty it is to carry into effect, under the directions of the physicians of the staff, all needed measures for the case.

The fearful increase in the number of victims, the majority of whom are wives and mothers, who are daily succumbing to the diseases peculiar to the sex, demands an increase of the facilities for affording medical and surgical treatment, adequate and within the reach of all, for this class of sufferers. To accommodate all who may apply to us for treatment, large additions and varied and

invaluable improvements have been recently completed in our Female Department.

The mechanical and surgical appliances pertaining to the Female Department are extensive and varied, gotten up regardless of cost, and from designs furnished exclusively by ourselves. The limits of this work will not admit of a detailed account of each individual invention or appliance. We feel justified, however, in saying to our numerous friends, that nothing is wanting to insure the comfort, happiness and welfare of our patients.

In the routine of daily business and toil the husband and father may overlook or fail to divine the cause of the care-worn face, the lusterless eye, and the unsteady step of the sufferer as she struggles along in her efforts to secure the happiness of her family, at a cost of pain, physical and mental, and with a disregard of self, that challenges admiration and calls forth our warmest sympathies in her behalf. Unwilling to add to the cares and anxieties of her friends, she conceals as far as possible her real suffering and disease, and continues to drag along a miserable existence, each day bringing mental depression with increased nervous pain and debility, until, totally disabled, she sinks into permanent ill-health or a premature grave.

The causes which lead to the development of these diseases are numerous. Among the more common we may mention excessive work or domestic care, improper food, imperfect nutrition, irregular habits, excessive indulgence, unnatural and artificial mode of life peculiar to the times, abortions, rapid child-bearing, tight lacing, hereditary taint, etc. Disease follows its cause as surely as night succeeds the day. Sooner or later the strongest constitution must yield, and the most vigorous and healthy female become feeble and anemic, if exposed, as thousands are, from choice or necessity, to one or more of the causes above enumerated. Sometimes from a false delicacy, oftener from neglect, the premonitory symptoms are disregarded. When concealment is no longer possible, and the disease is too firmly fixed to admit of further neglect, some of the *ordinary* measures are employed and pursued (so long as the urgency of present suffering demands), and usually a palliation of symptoms will be the only result, and the disease, checked for a time, will continue its ravages until, with constitution impaired, nerves shattered, and health gone, the

once happy wife or mother is but a sad wreck of her former self. That man is fortunate, indeed, who can successfully wage the battle of life with such a helpmeet. How many failures in business, how many blighted prospects and unrealized hopes are chargeable to this cause.

A word here to parties interested. While the legitimate exercise of married rights has been sanctioned by the good of all ages, yet we but reiterate the opinion of every competent judge when we make the statement that no woman who is the subject of well-defined uterine disease should submit to the sexual embrace until the disease, of whatever character or form, shall have been completely and thoroughly eradicated.

The uterus is the most wonderful organ in the human body. With an average length in the unimpregnated state of 3 inches and a weight of 2 ounces, it is susceptible of an extension or growth, during pregnancy, to 12 or 15 inches in length and 40 to 64 ounces in weight. Physiologists find here the most powerful known contractile tissue, the number of pounds pressure that it is capable of exerting reaching a figure almost fabulous. This wonderful fabric, provided to protect the foetus during pregnancy, and to perform a few hours of expulsive work at its close, returns, when its work is done, to its normal condition in a brief space of time, affording a striking example of the wisdom displayed in adapting means to the end to be accomplished. The womb, by means of its extensive nervous connections, exerts in health and disease a controlling influence over the mind. In disease this is eminently the case, as is strikingly shown in hysteria, puerperal mania, paralysis, etc.

The following plates, introduced for the purpose of giving clearer and better ideas of the malpositions and diseases of the organs, have been prepared. The designs were drawn from nature, hence their faithfulness. We doubt not they will convey to the mind of the reader an impression more satisfactory and correct than any description, however carefully prepared, could possibly do. To give representations of all the abnormal conditions and displacements affecting the uterine system would be impracticable in a work like this; therefore we select a few of the more common as well as the more serious and troublesome forms. Should we succeed in making the investigation and study of

these conditions more satisfactory and clear by this means than it has been heretofore we shall be amply rewarded for the effort made in this direction.

Plate 1 represents the uterus, ovaries, fallopian tubes, round ligaments and various parts of the organ concerned in utero-gestation. The right hand side shows the parts with the serous membrane removed; on the left side they are seen with the serous covering intact.

Fig. 1 represents the uterus. Fig. 2 represents the fallopian tube. Fig. 3 represents the ovary, where the ovum or egg is formed. It escapes from the ovary, and is received into the fallopian tube, the end of this tube being contracted and fimbriated (Fig. 4.) Traversing the fallopian tube, the egg is discharged into the upper part of the womb, where it is ready for impregnation, and if this occurs it remains for development and growth. Fig. 5, the vagina. Fig. 6, round ligament. Fig. 7, broad ligament. Fig. 8, mouth of the uterus.

Plate 2. A section of the female pelvis, showing the organs in their natural condition. Fig. 1, the bladder. Fig. 2, vagina. Fig. 3, the rectum. Fig. 4, the uterus. Fig. 5, last vertebra. Fig. 6, pubic bone.

Falling of the womb, (*prolapsus uteri*,) Plate 2, Fig. 4, perhaps the most common of all its misplacements, is usually attended by the following symptoms: Sense of weight and bearing down in the lower part of the abdomen, pain extending from thence across the hips to the small of the back and down the thighs, frequent desire to void urine, inability to remain long in the erect posture, weak, trembling sensation, sense of weariness, nervousness, mental depression, palpitation of the heart, shortness of breath, increased by violent exercise or going rapidly up stairs, sleeplessness, capricious appetite, etc. The causes are various, any thing that impairs the general health, lifting, tight lacing, congestion, etc. From the nature of its function, the womb is necessarily so situated as to admit of a large scope of motion, thus enabling it to accommodate itself to its ever-varying size during the critical months of pregnancy. This mechanical arrangement or situation of the organ renders it peculiarly susceptible to misplacements.

Retroversion, or falling back of the upper part of the womb, is

shown in Plate 4, Fig. 4. In consequence of this condition the rectum, lying in close proximity behind the uterus, is pressed upon, giving rise to frequent desire to go to stool, with a failure to be relieved thereby, and a constant feeling as though there yet remained in the bowels something which ought to pass away. In this condition the womb usually enlarges, and, becoming congested, is dragged down into the lower part of the pelvis, thus producing the ordinary symptoms of prolapsus, in addition to those symptoms which are the usual attendants of the above displacements.

Ante-version is a tilting or falling forward of the upper part of the body of the womb, as shown in Plate 5, Fig. 4. This gives rise to very distressing symptoms, chief among which are frequent, painful, and often ineffectual desire to urinate, this symptom being greatly aggravated by the erect posture and walking; extreme nervousness, with many of the ordinary symptoms of prolapsus of the organ. This, like all the displacements and malpositions of the womb, results from the disease of the organ or its appendages, and can only be permanently relieved by a cure of the disease from which it arises.

The abnormal, unnatural mode of life into which so large a portion of the American women of the present day have almost irresistibly and unconsciously drifted has developed a largely increased proportion of cases of congestion, inflammation and ulceration of the mouth and neck of the womb. A representation of these diseases is strikingly shown in Plates 6 and 7. The ulcers, or sores, (Fig. 1,) vary in size from a few lines to an inch or more in breadth. They are situated upon the neck of the womb, and extend, in many cases, over the lips, and along the mucous membrane lining its interior. These plates also represent another form of the female disease to which the attention of sufferers from its ravages has hardly been directed, namely, uterine leucorrhea. (Fig. 2.) The unhappy, disheartened and debilitated sufferer from this disease can here find an explanation of her case, with a reason for the failure of all remedies, regular and irregular, which she has summoned to her aid. The disease, originating in the *lining membrane of the uterus itself*, and not in the vagina, was never once attacked in its stronghold, never reached by the means used to alleviate or cure, hence the failure and disappointment.

These diseases are more wide-spread and common than most persons, not excepting those who are among their victims, would on first thought be ready to admit. Very few patients who are the subject of ulceration of the womb really comprehend or realize the fact that an ulcerating, corroding sore has fastened itself upon them, and is slowly but surely destroying the tissue and impairing the function of this delicate organ. Nevertheless they feel feeble and nervous, are full of neuralgic pains, have dizziness, rush of blood to the head, pain and heat on the top of the head, pains in the back and across the bowels, soreness in connection, or a strange want of usual and healthful sensations, and an absence of former desires, a sallow complexion, a hectic flush; but these symptoms and conditions are not interpreted aright, and the warning which they give is too often unheeded or misunderstood.

In addition to the above symptoms the mind partakes more or less of the diseased condition of the body, as evinced by fickleness, irritability and gloom. The world looks dark, the character changed, and is so during the continuance of the disease; in fact no words can describe the pains and ills, the loss of health, happiness and life that follow in the train. The presence of all the above symptoms will rarely, if ever, be found in a single case; therefore the presence of two or three, in a well-marked degree, should arouse suspicion and call for a strenuous effort to avert the coming calamity.

It is hoped that these cuts and explanations will convey some idea of the nature and functions of these important and delicate organs, and that the location and character of their diseases may be better understood. If the ovary fails to furnish the egg, or the fallopian tubes are inadequate, from disease or other causes, to the task of conveying it to the womb, or if, having arrived safely at this receptacle, the organ itself is diseased, barrenness may follow.

The nature and location of the disease will determine its bearing upon the reproductive process; for not every case of disease, even though it be grave in character, will be attended by barrenness: nevertheless tumors of the ovaries, congestion of the womb, and many other diseases may be followed by this result.

Plate 8. In this plate the blood-vessels are shown, traversing

the organ in every direction, and giving it an abundant supply of blood. Local irritation and many forms of disease invite an increased flow of blood to the parts, giving rise to pain, increase of weight, displacements, leucorrhea, and ulceration. A striking and characteristic difference is observable between the diseases usually affecting the womb and its appendages, and the ordinary diseases and fevers with which the general practitioner has to deal.

An inflammation of the lungs or a typhoid fever may run its course unassisted to a favorable termination, the cure being accomplished alone by the powers of nature, the *vis medicatrix naturae*, as physicans so often say; but a disease of the uterus or its appendages is followed by no such results. On the contrary, its tendency is to indefinite perpetuation; morbid, diseased action ceasing only with the extinction of vital power. Let no sufferer be deceived by the advice of inexperienced persons, or be prevented by the opposition of relatives or friends from seeking relief while yet there is hope of a cure. Rest assured that nothing will so certainly contribute to your happiness and welfare, as well as to the happiness and welfare of those around you, as release from the enfeebling, painful, miserable condition into which you have been dragged by disease; and that your friends will not be slow to justify your course and approve your spirit and determination when the rosy hue of health and the firm elastic step announces your complete recovery.

The treatment of female diseases has been a fruitful source of annoyance and perplexity to the general practitioner, and of suffering and disappointment to the patients for obvious reasons. For us to say that the time-honored methods for treating these diseases are erroneous and injurious might seem like presumption or egotism, (especially to the older members of the profession,) but it is too often true. Galileo contradicted the philosophy of his day, and all know his persecution. Harvey was condemned for overthrowing the medical theories of centuries.

Presumptuous as it may seem for public sentiment to wrest the lancet from the good old doctor's hands, and denounce its use as murderous barbarism, (although it had been considered a sheet-anchor and "sine qua non," in many cases, for centuries,)

and leave him to sneer at progress and mourn his bosom friend, yet the old ruts must be filled.

The propriety of abandoning the indiscriminate use of the lancet, or even of its frequent employment, is no longer questioned by the most ultra regular. All now admit that the present age is one of progress and of investigations, that our march is ever onward. We do not believe that the seaton, the caustic or the moxa ever really accomplished the good that is claimed for them, any more than we believe that the duped Greeks and Romans were really cured by the incantations and secret remedies, such as viper's blood, etc., or the heathen Chinese by the barbarous ordeals which were called into requisition when they were sick. Nor do we to-day believe that the cauterization of the uterus, as a common mode of practice, is either judicious or beneficial. Inflammation, congestion and ulceration of the vagina and womb have the same characteristics and are governed by the same laws and influenced by the same conditions that similar affections are in other parts of the body. The blood-vessels are distended and engorged in the same manner, and the swelling depends upon the same unnatural condition. Any treatment, to be successful, must by some rational means unload the distended blood-vessels, restore them to their proper size and tone, and thus relieve the parts affected of the swelling, heat and pain. Irritation precedes and is a fruitful source of inflammation. It is also one of the most constant and immediate results of the application of a caustic. Which is the most reasonable? Apply a medicine which will of itself give rise to inflammation, and, if persisted in, is total destruction of the parts, or to cure the diseased condition by more rational means, leaving the parts whole, instead of destroying them with the vain and foolish hope of effecting a cure? Suppose hundreds of cases have improved after the use of caustics. Hundreds have also recovered after severe bleeding and terrible burning with the moxa; and hundreds also recovered after being wounded upon the battle-field, and submitted to the old practice of having the wounds filled with boiling oil. But might they not have done better under a better, more reasonable, and sensible plan of treatment? Many old theories are manifestly false. In consequence of their habits of life, the ladies of the present day are prone to

congestion and inflammation of the os uteri and vagina, and the almost inevitable result of these conditions are leucorrhoea and ulceration, which implies destruction of tissue. We claim that these conditions should be treated upon a plan that will not only afford speedy relief, but a more lasting cure. It is not only the mucous lining that is involved in this congestion, but the whole pelvic organs suffer more or less: hence the application of medicines to the mucous surface alone can not by any possible means restore to their normal size and condition the thousands of congested and diseased vessels situated at too great a distance from these surfaces to be in the least affected by such applications. The human body is like a wonderful machine, and its continuance depends upon the free and harmonious working of its several parts, and when but a single part becomes deranged, or fails to act, the machine suffers, and its usefulness is either greatly impaired or entirely lost. When inflammation exists in a part, an undue amount of blood has accumulated there, giving rise to over-distension and consequent impairment of nutrition. This condition can not long exist without destruction and breaking down of tissue; hence we have ulceration and sloughing, (see Plates VI and VII), with its concomitant evils and disturbances of the health. Now the object to be accomplished in these cases is to *invite, to call away* from these diseased structures the excess of blood which they contain, and to equalize and restore the circulation, to give a healthy tone to the coats of the vessels, to substitute a condition of ease and health for one of pain and ulceration. Local applications and general medication, as ordinarily employed, can not accomplish this end. The truth of this statement is abundantly established in the thousands of failures by the ordinary method which meet us at every step in the progress of our investigations. And yet no mucous surface is more easily reached or treated with more facility. In this brief chapter a full and exhaustive explanation of the rational, painless, and entirely unobjectionable mode of treatment which long years of experience and observation have led us to adopt can not be given, but a few suggestions may not be out of place.

The common syringe, with rubber pipe and bulb and metal tubes, is superior to the old glass or metal syringe, and yet it is but a burden upon properly administered injections. The fluid

passes through the tube into the vagina in a broken stream of not more than one-fourth of an inch in diameter, and, allowing an equal space for its return, the area of mucous membrane reached would be little greater than that occupied by the metal tube. No obstacle is interposed to prevent the escape of the injected fluid, no provision for distending the folds of the vagina; hence many folds and wrinkles are not reached by the medicine or fluid used. The truth is that the vagina should be completely filled by the fluid, thus distending and unfolding its walls and carrying the uterus to its proper position and retaining the wash as long as desired, and at the same time bringing the medicated injection into direct contact with the entire vagina surface and mouth of the womb.

The movement cure, with new arrangements for oscillation, the oxygen gas, electrical baths and other appliances of various kinds are in successful operation. We discard the disgusting pessary that every lady has learned to despise who has had a trial of it. Female assistants conduct the treatment prescribed by the staff, and there is therefore no objectional exposure. While we do not discard the use of medicines, we denounce the indiscriminate and wholesale drugging generally in vogue, and declare our want of faith in the so-called *specifics* which are administered by the mouth with the hope that in some manner, unknown alike to physician and patient, they will reach and act upon the diseased organs and structures. The foolish quackery which is for ever "building up the system" ostensibly, while in fact the vital powers are being surely and steadily broken down, is equally reprehensible. In this manner thousands of lady sufferers are "toned up" with iron, bark, and all kinds of tonics and elixirs, until their ruined health forces upon them a realization of the almost fatal mistake. Better cure the disease than treat the symptoms. A lady looks pale, is anemic, not alone on account of a deficiency of iron in the blood, but from some cause, or combination of causes, the blood is not up to the healthy standard or type. Iron constitutes but a small and comparatively unimportant part of this deficiency. Iron, although now deemed indispensable in the construction of railroads, and for thousands of other purposes, can never be manufactured into a main-spring for running the delicate and complicated human machine; hence the practice of

administering iron in powder, iron in pill, iron in tincture, and iron ad infinitum must of necessity be a failure. What is true of iron is equally true of all the specifics in popular use. We cast no censure or reproach upon the general practitioner of medicine. His labors and responsibilities are great, and, if faithfully and conscientiously discharged, will leave little time for the preparation and application of such remedies and appliances as can only be properly and satisfactorily used in an institution practice. If these cases could be as successfully treated in private practice as elsewhere, they should not have been permitted to become chronic. We have scarcely ever received a patient reduced in flesh, who did not at once begin to improve in health and increase in weight and strength; and we are sincere in the belief that our method of treating this class of cases is more satisfactory, yields better results, and is therefore superior to any one heretofore employed, either by the general practitioner or the specialist.

CHAPTER XXIII.

SENDING MEASURES FOR BRACES AND OTHER SURGICAL APPARATUS.

WHEN cases of deformity occur, requiring surgical apparatus in the course of their treatment, it is quite common for the friends and the attending physician to think that the dimensions of the body or limb can be taken and the measurement sent to a machinist or instrument maker, and thus obtain the required brace for the patient.

Such a course would only end in disappointment, and if nothing further was to be done than the application of such a brace, the patient would remain a cripple for life.

In the treatment of spinal curvatures, hip-joint disease, and other deformities, we find no two cases that are exactly alike, and no two persons or limbs are exactly of the same size and shape; consequently, any ordinary measurement would be of no use to us in the manufacture of braces for such cases. This fact is very conclusively shown by examination of our apparatus books, in which are recorded thousands of measurements.

It would astonish any one to see the variations in the measurement of cases, that appear to the eye alone to be exactly alike, but which upon careful examination by proper measurement are found to be very unlike. Experience has taught us that surgeons and physicians, without practical knowledge of this specialty, can not make a measurement or diagram from which our mechanics can make a satisfactory brace. This being the case, how can persons without surgical skill or knowledge take measures that would be otherwise than very defective and incorrect.

Should apparatus be made from such measurement and applied to the patient, results worse than simple disappointment would occur. Positive harm would be done in almost all such cases.

If it were possible in this way to obtain apparatus that would be adapted to the case when first applied, a failure of success would doubtless result, owing to the need of proper adjustment daily, by some one of experience and skill in the treatment of such cases. The pressure and bearings upon the person must be looked after constantly, and such changes made from time to

time as are indicated in the case. It often occurs that an appliance will accomplish the special part designed for it in a comparatively short space of time, and then a radical change in the apparatus must be made to finish up the work of correcting the deformity, and the expert only is competent to make the required change, so as to insure the final favorable results required. Take, for example, a *club foot*: it is idle to suppose that one brace will correct such a deformity; and yet, with the proper changes in the brace as the case progresses, such a deformity can be perfectly cured. Such cases of deformity require constant attention and very close observation, in order to accomplish the results required; and what is true of club feet is equally true with other limbs and other deformities.

It is a very common occurrence for us to receive remittances of money by the mails, with letters asking for prescriptions for the treatment of various diseases; we also receive measurements for surgical appliances. Such communications are always answered with the information that we never give medical treatment or surgical appliances, without first having made a personal examination of the patient. If it is necessary that we should take our own measurements and adjust our own mechanical appliances to meet the various indications and conditions of each case, is it not of equal importance that we have a personal examination of cases needing medical aid. To prescribe for a patient, intelligently, we must know the history of the case, the temperament, hereditary peculiarities and taints; the age, sex, stage and progress of the disease, etc.—all of which are actually necessary to know before a proper prescription can be made. Having once made a proper examination of a case, treatment may be successfully conducted with the patient at his home, even if the distance be great.

It is for the interest of every one desiring treatment at the INSTITUTE, to visit us in person. We do not require a fee for personal examination. If the case is incurable, we do not attempt treatment but dismiss it at once, as we do not take any patients that we think we can not either cure or greatly improve.

Our advice is, take no medical treatment from any physician without a personal consultation; wear no braces or other surgical appliances that were not made especially for you, from measurements taken by the mechanical surgeon in charge of the manufacturing department.

CHAPTER XXIV.

THE EYE AND EAR.

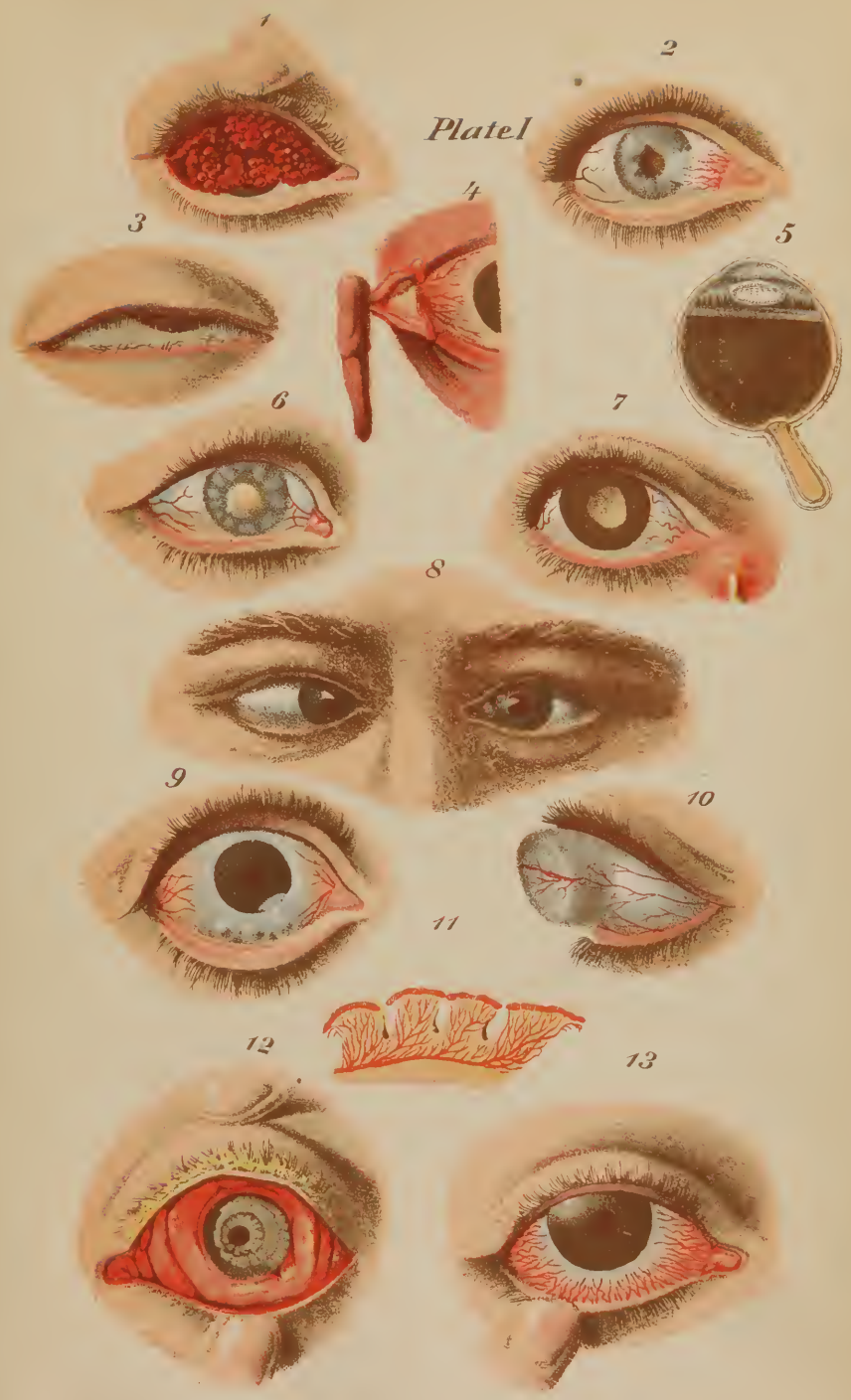
IT IS well known that the eye and ear require the most careful and delicate treatment. One of the most eminent medical men now living, says: "The treatment of diseases of the eye and ear ought in *all* cases to be entrusted *only* to those who make these organs their constant and special study. The general practitioner leads too busy a life to become proficient in these departments. Never let any one touch, prescribe for, or operate on the eye or ear, who is not known to be thoroughly prepared and competent.

That gross errors are daily committed by both patients and physicians in the treatment of diseases of the eye and ear, the myriads of the hapless blind and deaf all over our land too fully demonstrate. To the considerate mind the question naturally arises, is all this sadness necessary, or can it not be prevented? It is, we think, justly claimed that no one can excel in many things. No great man was ever great in many things, but only great in his adopted speciality. The mind must be concentrated if more than ordinary results are attained; besides, to deal with such delicate and intricate organs safely, requires constant and extensive experience in their treatment, such as no general practitioner of medicine can have. The eye is an organ not only the most sensitive and sympathetic, but when diseased requires the most prompt, mild and efficient treatment.

From recklessness, neglect and ignorance, many sad cases of blindness, suffering and misery occur. Results of this kind and from such causes are perhaps pardonable; but when professional aid is sought for, even the ignorant and simple-minded are not excusable for placing themselves or their friends in the hands of ignorant pretenders—who know no more about the eye than they do of the future world—ever ready to prescribe nostrums for every sufferer, utterly regardless of consequences. Competent, scien-



Platel



tific oculists can be found, and such only should be trusted with the treatment of this organ.

There is no organ in the whole body in which the ravages of disease are more frightful than the eye. Our institutions for the blind, could their history be known, would be a gigantic repetition of the story: neglected disease or improper treatment. And yet there is no part of the human body that gives such satisfactory and even brilliant results to proper treatment as the eye.

CROSS EYES—(STRABISMUS.)

(Figure 8.)

There is no deformity that attracts greater attention and is really more unsightly than cross-eyes. The eye rests in a socket and is moved and controlled by six cords or muscles; an undue contraction of one of these muscles causes the eye to turn in or out, sometimes up or down. The failure of so many who operate for this deformity is due to their ignorance of the true cause. We can assure every one who is afflicted with this deformity, of a perfect cure.

Why should it be done in early life? If you ask any adult who has a cross eye, in nine cases out of ten he will tell you: "My cross eye is partially blind." If the eye had been straightened in youth it would have been as good as the other. Fathers and mothers, your children will never outgrow it. Do not let your children reach maturity with this deformity, which ruins the sight of the eye, and subjects the child to a life of ridicule, when a simple and almost painless operation will cure it.

This deformity is produced by undue contraction of the internal recti muscles of the eye, drawing the eye towards the nose. This may exist in one or in both eyes. The causes are various, such as spasms, fevers, whooping-cough, sore eyes, etc. The deformity is very easily removed and the eyes straightened. It will cost but little, can be done instantly, without pain, and relieve a life-long mortification. However we may try to convince those thus deformed that it is a trivial matter, yet the most stubborn fact exists, that their enjoyment and prospects are compromised for life unless it is removed. And since the cure is as free from pain and danger as any surgical operation, and so perfect

and instantaneous, none can afford to endure the mortification that cross eyes inflict.

CONJUNCTIVITIS.

(Figures 12 and 13.)

Inflammation of the eye (by most people called the common sore eyes) is so common as to need no description. It may attack the eyes of old or young at any season of the year, and with or without any cold, injury or assignable cause. This is far more common than any other disease to which the eye is subject, and the majority of cases recover if properly treated. During the inflammatory or active stage, which may last from two to three days to as many months, more or less pain, intolerance of light, excessive flow of tears, and a discharge of more or less matter attends the trouble.

As the pain and swelling subside, if the eye is not lost, a chronic stage may follow, and if there is no ulceration of the ball, the mucous papillæ or follicles of the lids become hypertrophied, or increase in size, and what is termed granulation of the lid ensues. (See granulated lids.) The treatment of this acute inflammation of the eye should be exceedingly cautious and guarded, lest more evil than good result from it. All poultices should be most positively forbidden; no warm or hot appliances should be made unless cold produces actual pain, which will never be the case, unless much neuralgia attends the disease, or produces it. If such should be the case, the ordinary treatment of neuralgia should be administered, doing nothing for the eyes in the meantime. But this disease is seldom attended with neuralgia; and cold applications, such as the cold atomized spray of weak solution of acetate of lead, applied to the closed lids for hours at a time, is not only the most grateful but beneficial. When this can not be had, soft cloths, dipped very often in some solution containing ice, should be applied constantly. Active saline or (cholagogue, if necessary,) cathartics should be given, and abstinence from food and water enjoined for a time. Avoid much exposure to heat or cold, and the use of the eyes. Very many cases will soon yield to this treatment; some, however, after a while require a little medicine put in the eye, as an astringent emulsion and anodyne, but this should be done most

cautiously and guardedly. Of course, to prescribe a single treatment adapted to all cases would be preposterous; or to prescribe for individual cases without seeing the patient would be equally fallacious. Never listen to the medical advice of any one who is not a physician, as danger always attends such advice, and you may sacrifice your sight and happiness for life by it. Many of these cases become chronic, and linger for years, even if the sight is not destroyed. If you would save the eye, don't neglect this disease. Never let your house burn down, and then get anxious to put out the fire, but do it at once. This trouble may end in not only loss of sight, but in a hideous deformity. (See Figure 10.)

The causes and varieties of this disease are numerous, and each variety requires a particular method of treatment. The ordinary form, caused by exposure to bright light or a draft of cold air, when taken in time, is easily cured; but, neglected, degenerates into that most common of all chronic diseases of the eye—granular ophthalmia.

GRANULAR OPHTHALMIA.

(Figure 1.)

This is the most common of all chronic diseases of this organ. Thousands upon thousands of sufferers from this disease are seen all over our land; some with occasional trouble, then a little clear vision; over others the cloud of darkness hovers, shutting out with a constant mist from the mind all satisfactory cognizance of the world; others, under a total eclipse of the "windows of the soul," grope in thick and impenetrable darkness during the sad remnant of their existence on earth.

The dark abyss of earthly woes
The helpless blind man only knows.

It is induced by a variety of causes. Among the most prolific is inflammation of the eye; or, as the patients say, they had the "common sore eyes," and since then the eyes have remained weak. The disease may be rapidly induced, or years may elapse before serious trouble exists or the eyes are seriously injured. Scrofula often has much to do with the development of this mal-

ady, or its persistence. Other causes often excite the diseased action.

The symptoms are, to those unacquainted with this affliction, rather obscure and often varied; in some instances, weakness of the eye, dimness of sight, itching of the lids, "blurring" in trying to read; the letters seem to run or mix together; a mist forms over the eye, which a little rubbing will temporarily remove. In the morning the lids may stick together; a scratching as though sand was in the eye, which a little bathing of the lid removes. The lid, and sometimes the ball, looks red; or when in the wind, heat or smoke, the eyes are irritated easily, and tears flow freely. Some or all these symptoms are present in the early stages, but as it progresses more grave and serious symptoms supervene. The ball becomes red; intolerance of light; sight declines, pain and suffering often attending; the ball becomes more and more affected; ulcers often form; the cornea often sloughs, and the sight is lost. In more simple cases opacity of the cornea (a "scum" over the sight) is produced, destroying the sight; though often not rapid in its course, yet destruction of the eyes is inevitable unless proper and timely assistance is obtained. Whenever any of the above symptoms are present, whether you are subject to sore eyes or not, it is a warning to seek relief at once, if you wish to preserve your sight.

In ordinary treatment of this affection, more eyes are lost or injured than properly cured. You ask why is this so? or, why not let them alone, if such are the results of treatment? We answer that such is, we are happy to state, not the result of proper treatment, and if let alone, the sufferer becomes blind. And in order to understand why so many go blind under the ordinary treatment, we will first investigate the condition or pathology of the part affected. The mucous membrane that covers the visible part of the ball and lines the lids is similar to that of the mouth, lungs and intestinal canal, the papillæ and underlying glands varying to suit the necessities of the location or organ dependent on or connected with it. In the eye it is quite smooth, and a portion of it perfectly transparent. The remaining portion contains the ordinary mucous follicle and minute papillæ. These are abundantly supplied with blood, and often take upon themselves a morbid growth, and continue to a size

from that of a pin's head to a grain of wheat, becoming highly vascular, the blood-vessels increasing in size as rapidly as the granulation, as it is then termed. Fig. 11 shows the blood-vessels magnified; upon the upper edge is formed a hard lamelated structure, or layer, and the base is, in bad cases, a mere pedicle compared to the top of the granulations.

Now, it is a fact that the more abundantly a part is supplied with blood, the harder it is to destroy. (The design of all treatment should be to destroy these granulations, as no other course proposes even a hope of relief.) So if medicine be applied to the whole lid as it is the sound texture is destroyed, and the most of the granulation left. And it is a law of nature that like produces like; if bone is broken, bone repairs the break; if muscle is injured, it is replaced in kind; if it is skin, skin restores it; if mucous membrane, it is repaired by the same. If this was not so, man would soon cease to be man, and our whole organization would be changed. If a part of a tumor or cancer is removed or destroyed and not all, the space is refilled with the morbid growth. So with granulation of the lids; if all of them are removed entire at once, the lid is ruined by a large cicatrix or scar, producing entropion, or inversion of the lids, a disease no better than the first; and if by piecemeal, as it is generally done, the granulations simply fill and refill the place of those destroyed. How to deal with this rebellious difficulty and make a speedy cure, physicians admit to be a vexed question; and the patients as well as the physician, by sad experience, realize that but few, very few, are successful in the cure of such cases. If a scientific treatment is ever demanded for the cure of any malady, it is in this; as those who treat and are treated learn that the rules laid down in medical works often fail.

Figure 1 of the plate represents granulation of the eye in an aggravated form, but not very uncommon. The disease, even in the condition as here represented, is amenable to treatment, and should not be left to produce total blindness because of its discouraging appearance. Such cases have been often perfectly cured at this institution.

STAPHYLOMA.

Ulcers on the eye-ball are frequent, and may result in staphylo^{ma}—the tumor represented in the cut. The deformity can be easily removed by an operation.

ENTROPEON.

Inversion of the lids as seen in figure 3 is a most serious and annoying affection. It is generally induced by acute or chronic inflammation of the lids, or bad treatment for granulation, producing contraction of the membranes and tissues, inverting the lid. The scratching of the lids upon the balls produces pain, inflammation and thickening of the membranes that cover the eye. Finally, by this thickening, a dull appearance is produced, with loss of sight. The natural appearance of the ball gives place to a red or grayish hue, and the ball may protrude like Fig. 10. The sight is then lost. Sometimes only one lid is inverted, and the trouble is not so serious for a long time; but if the lashes scratch at all, the eye will become inevitably more and more diseased, and be lost. Many persons, when this trouble commences, are told that wild hairs are growing out, and at once the lashes are pulled out with the hope of relief, but the result is pernicious. All sensible people ought to have learned before this that there are no such things as wild or tame hairs that grow in upon the ball, unless the lid rolls them in; and the pulling out of the lashes always increases the trouble. The treatment and radical cure of the affection is easy, and completed in a very short time. We have restored some of the most distressing cases of this kind, and many who were supposed to be blind have had good sight restored.

ECTROPEON.

In this difficulty the lids are turned out and drawn either down on the cheek or up on the eyebrows, disfiguring the face badly. this is very easily relieved by a surgical operation, making a perfect lid, and restoring the symmetry of the face.

The different malformations of the lids can all be remedied by an operation. It is astonishing how the different deformities and malformations in and about the eye can be so thoroughly cured without leaving a perceptible scar.

AMUROSIS,

A disease of the retina and paralysis of the optic nerve, is a disease of most serious importance, as most cases, if neglected or improperly treated, result in continual and total blindness. Its causes are various. The symptoms are flashes of light; dark spots floating before the eyes, sometimes stationary; pain occasionally; intolerance of light; finally, insensibility to light. Sight is useful only in a bright light. The appearance of the eye is not usually changed. A minute detail of the symptoms which may or may not occur, of the treatment or its results, can not here be given for want of space; but as it is a disease nearly *always fatal* to the sight unless soon arrested, don't try experiments, but seek proper treatment early if at all. In this disease a dropsical effusion sometimes follows, (see figure 9,) which may increase indefinitely, producing pain and a terrible deformity.

PTERYGIUM.

(Figure 2.)

This disease is produced by hypertrophy, or fungoid growth of the vessels and tissues of the front portion of the ball. (See figure 2.) The most common seat of this trouble is the inner corner of the eye, though it may come upon any part of the ball. It commences by an apparent enlargement of the veins and arteries of the external coats. Soon a fleshy substance gradually advances towards the pupil, thickening and spreading as it advances. Finally the pupil is reached, covered, and the sight lost. This is not painful or troublesome usually, and negligence is thus permitted. The treatment should be early, while it is small and simple. In the treatment of this affection great errors are committed. Some will attempt to relieve it by astringent medicines, making the trouble worse; others, with an idea of more thorough treatment or a radical cure, cut off the offending portion, thus expecting to cure; but if it is excised it is reproduced, and even worse than before. The same law holds good that like will produce its kind. The same vessels that produced it once will again. You only cut off those small branches, and the granulations produce the trouble anew. It should never be cut off; the operation for a cure is exceedingly simple, and the philosophy of it apparent to the most careless observer; yet a minute description of

the treatment in this publication would be tedious; but suffice it to say, it requires but a little tact to make nature do her work over again and correct the trouble.

This cut represents a pterygium.

CHRONIC INFLAMMATION OF THE EDGES OF THE LIDS.

The edges of the lids are red and inflamed, especially when used by artificial light; crusts or scabs collect at the roots of the lashes; the lashes themselves are observed to fall quite rapidly, and there is danger of losing them entirely. The treatment is simple, and a cure can be guaranteed in every instance.

Tumors of the lids do not need description, for they are observed as a small lump in the lid. They are a deformity; are liable to grow quite rapidly; and seriously injure the eye. They should be removed as soon as observed; the operation is almost painless.

DISEASES OF THE TEAR PASSAGES.

ABSCESS OF TEAR PASSAGES.

The tears enter the eye at the upper and outer corner, and, after flowing over the eye-ball, pass into the lower part of the nose by a narrow passage an inch long, which commences by two small openings in the edges of the lids at the inner corner of the eye. They can be plainly seen by turning the lids slightly out. An obstruction at any point causes the tears to run over on the cheek. The duct may be seen (figure 4) which carries the tears from the eyes to the nose. The little tubes carrying the tears from the inner corner of the eye to the duct are called canaliculi; they often close and produce the same overflowing of the tears. Should the closure of this duct continue, an abscess will form just below the corner of the eye, (see figure 7) producing a very disagreeable affection. Before the abscess forms a lump will often be found, which, on pressure, will discharge matter into the inner corner of the eye. This trouble is curable if taken in time and properly treated.

CATARACT.

(Figure 6.)

This cause of blindness is becoming more prevalent, and many more are suffering from incipient cataract than is generally sup-

posed; but a few words on this subject will suffice. How shall the patient decide whether he has it or not, and what shall be done? are the questions. Dimness of sight (and this without pain,) soreness, spots, flashes of light, and a gradual thickening of the mist that appears between the eye and the light. It first occurs in one eye, then in the other, and not usually in both simultaneously; vision is best in the morning or evening, or during a cloudy day; a bright day makes the sight less; the eye will look as natural as though no difficulty existed, except by close inspection; the pupil, which ought to be black, will appear white or milky, and as sight fails the white appears more apparent. This disease is curable by a slight operation only. (See figure 6, showing the seat of disease.) Never spend your money upon humbugs, who claim that they can drive it away or clear it up with medicine, electricity, or any external appliance, or medicine taken internally; for if they are either so ignorant or deceitful as to impose upon the suffering, then have nothing to do with them. The proper treatment is quite simple and generally successful; and the happiest creatures ever made so by the science of surgery are those brought from darkness to again view nature's grand and glorious panorama, and again to enjoy such blessings, once theirs, lost and reclaimed. How often have we seen the tears of joy, uncontrollable, like rain, trickle down the cheek as light flashes in again upon the soul, bringing back so much that was lost, but now doubly dear to their very existence. To see the old mother of seventy-five summers, who for ten years had not seen a living being, going down to the end of time, old, decrepit, blind and poor, never again she thought of seeing those she loved; the only light to her was memory's retrospect, and hope beyond the Jordan, when the curtain was removed, and light, with its sweet effulgence, cheered her gloomy soul with the thought, as she said, that it was a sweet interlude between earth and heaven.

This picture represents a cataract of the eye. It is noticed that the pupil of the eye, which ordinarily is black, is in this case gray or white: that is the cataract. Not unfrequently no peculiarity is observed in the eye, and it is then difficult for any one but the educated oculist to recognize the disease. The patient may have a peculiar groping gait; may see better in a

cloudy day or in the dusk of the evening than in the bright light. He may have flashes of light or sparks, or steady dark spots in front of the eye. *

A case of cataract never gets well without an operation: whoever tells you to the contrary either knows nothing of the subject or wishes to rob you of your money by base quackery. The operation for cataract is not painful, but is allowed to be one of the most difficult in the whole range of surgery, and when properly performed is attended with the most brilliant results. We can promise success in *ninety-seven* cases in a hundred. There are many thousands groping blindly through life who could receive that greatest of all temporal blessings, SIGHT, by the performance of a single operation.

ARTIFICIAL EYES.

We keep constantly on hand the best assortment of artificial eyes, and feel assured that we can satisfy any one in need of them. We will sell them cheaper than any one else keeping the same quality. To those who have never worn them we would say that *there is no pain or surgical operation necessary in the use of an artificial eye*. They are worn for comfort and the relief of one of the worst deformities that can befall us. If you have an old one, you can send it as a sample of color and shape, and thus order what you want without coming; but if you have never worn one it will be necessary for you to visit the Institute to have it fitted.

DELAYS ARE DANGEROUS.

If you have any trouble of the eye, hasten to a competent ophthalmic surgeon. In many more cases than is generally believed, every hour is fraught with danger.

Is your little child born blind? Have you any blind children, or any with defective eyes: be sure and have them carefully examined. Many in our blind asylums could have been given good sight in their youth; and many adults who are blind, or have even been blind from infancy, can, by a skillful operation, obtain useful vision.

In a large majority of cases of partial and total blindness, the *retina* and *optic nerve*, which lie in the back part of the eye, are in

a perfectly healthy condition; the structure in front of these have from a variety of causes become thickened and opaque. Light does not pass through to those regions where the sensation of sight is produced, but if light can be admitted by an operation, the patient will receive the great boon of sight, become a useful citizen, and bless the advances of modern science which have made him happy and independent.

DISEASES OF THE EAR.

Science is constantly making new discoveries. As our knowledge increases, our treatment of disease becomes more rational. Perhaps no greater revolution has taken place than in aural surgery. It is not generally understood that the ear is fully as delicate an organ as the eye, for many will allow experiments upon this organ by an ignorant pretender who would recoil from anything much less serious proposed for the eye. The mechanism of the human ear is the most delicate part of the whole body. Before you allow any one to prescribe for this organ or operate upon it, be sure he has made this his special study and is thoroughly competent. Until within a few years most of the diseases of the ear were deemed incurable, and even to-day this belief is wide spread.

Fortunately this is an error. Nearly all the diseases of the ear are curable.

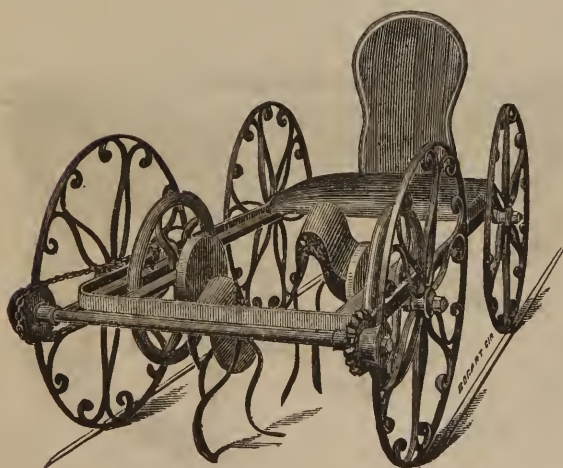
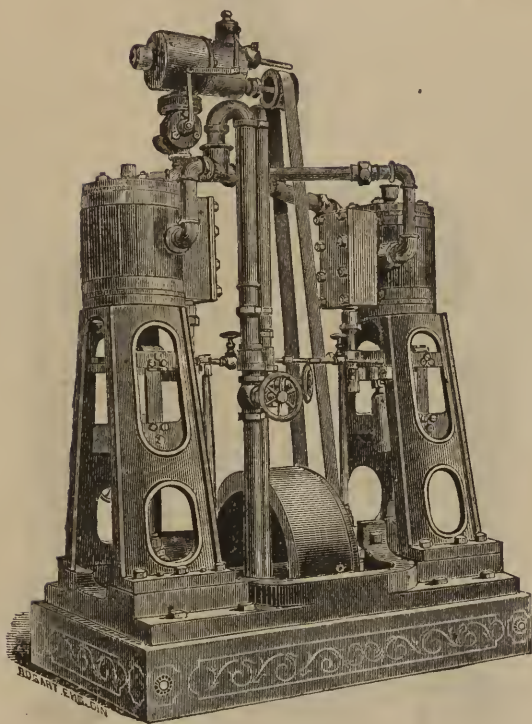
The inner parts of the ear are so hidden from observation that the public generally does not appreciate the sad results of neglect. A discharge from the ear, however slight, is indicative of a destructive inflammation going on within. The delicate parts of the ear are constantly bathed in the foul discharge, and before one is aware the organ of hearing is totally destroyed. There is a prevalent opinion that the discharge ought not to be stopped, that it will injure the health of the child to do so. This is a grave error; the sooner it is stopped the better chance the child will have to regain hearing. The drum may be thickened by chronic disease, or there may be deposits of bony or calcareous matter in it, or there may be a hole in it, or it may be entirely gone. All these defects seriously interfere with hearing. When the drum is thickened, applications can be made to improve hearing; when there is a small hole in the drum, it can generally be closed by induc-

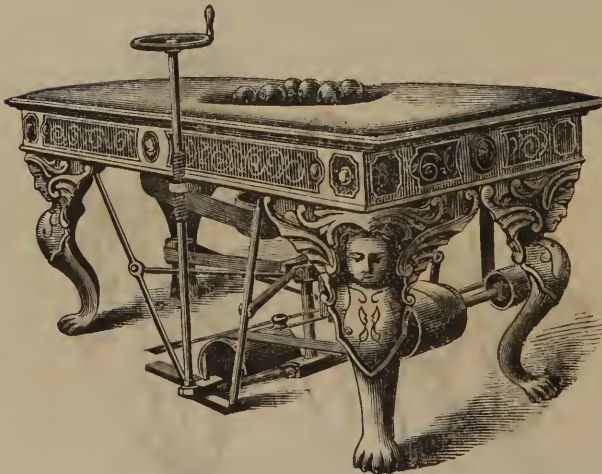
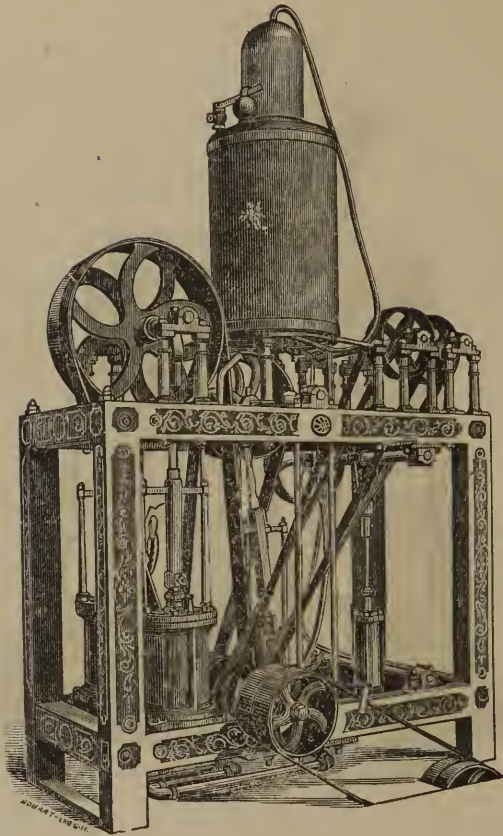
ing a plastic healing process. When we do not succeed in closing up openings, we introduce an artificial drum successfully.

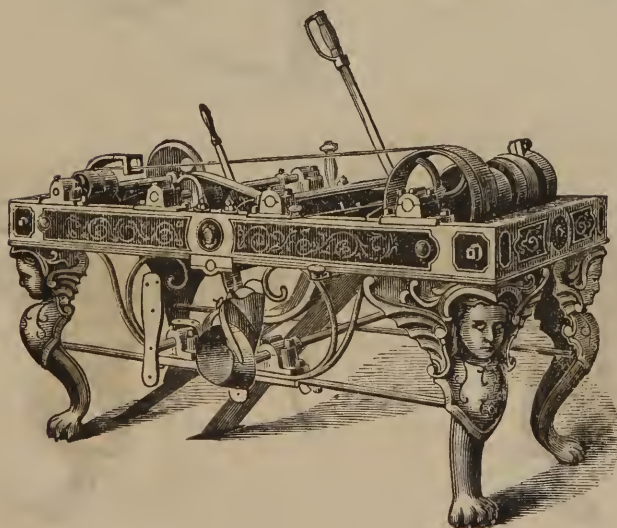
The diseases of the ear are more numerous than is generally supposed. In the last report of one of the largest ear hospitals in the world, *twenty-two* distinct diseases of this organ are recorded. Too many apply the same remedy for all aural diseases. It is evident to any one that this is wrong, for it endangers the life and happiness of the patient, and is dictated only by ignorance. Manifestly, to any thoughtful person, each disease requires its appropriate and distinct treatment.

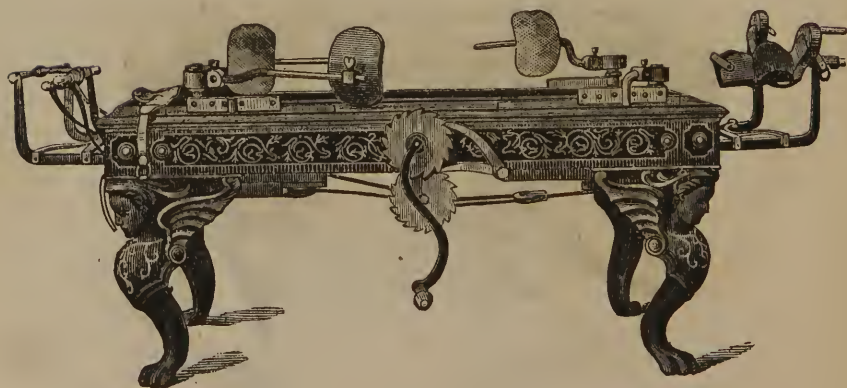
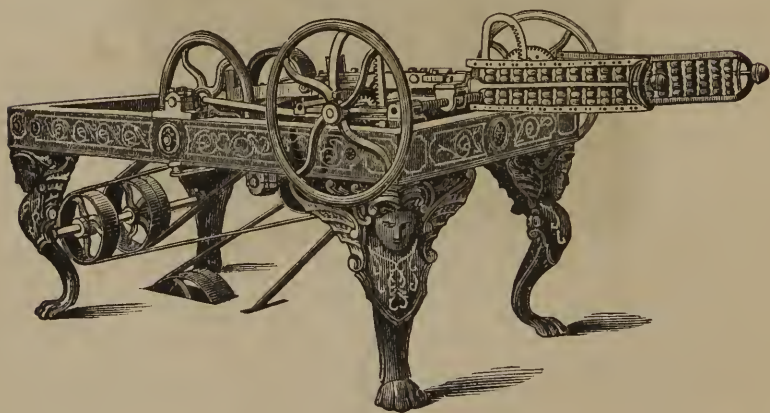
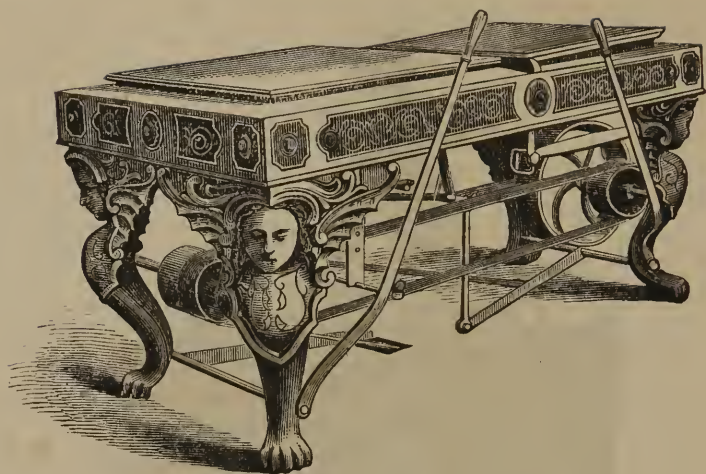
Do not listen to the advice of those who tell you that your deafness has lasted so long that nothing can be done for it. Very many who have been deaf for years can be entirely cured, and still many others who are rendered totally unfit to transact business or have intercourse with their friends, can receive enough benefit to make them useful citizens, and a comfort and blessing to their homes.

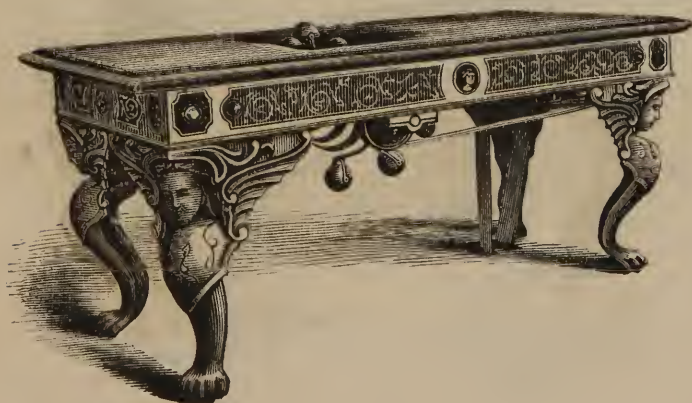
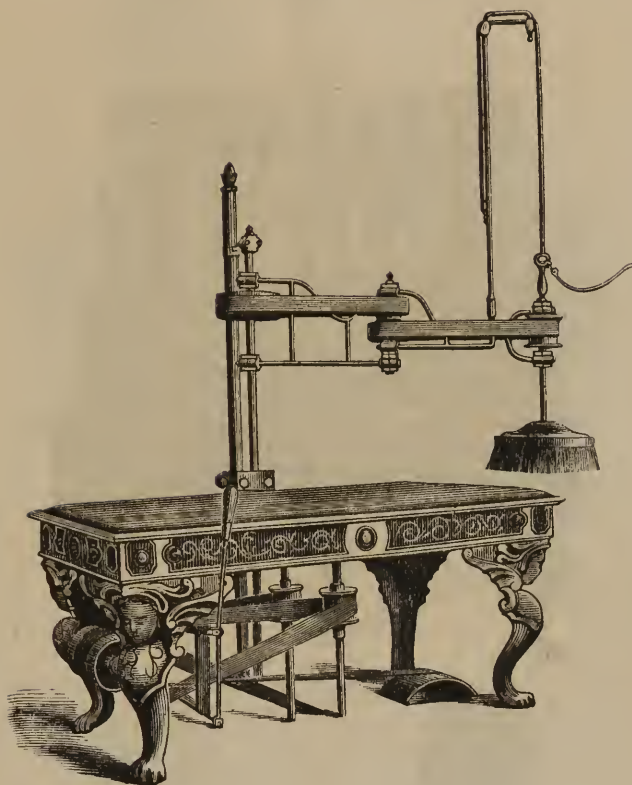
No one can afford to take the risk of delay or experiments by those who are not especially skilled in the science of aural surgery.

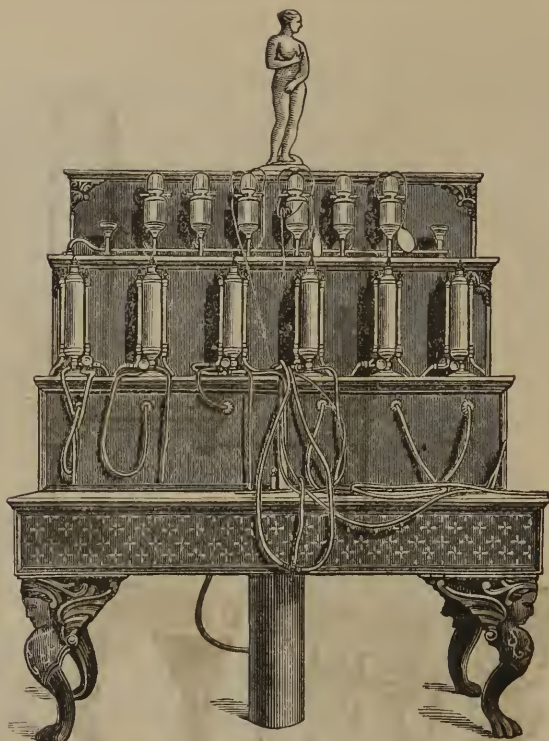


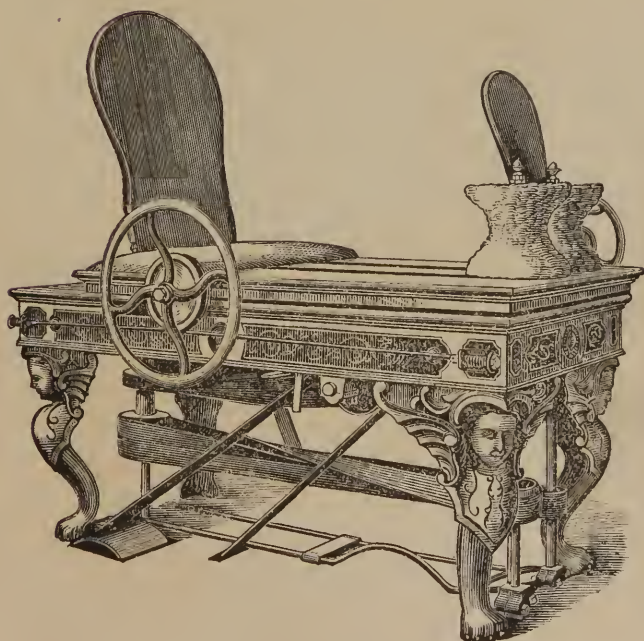
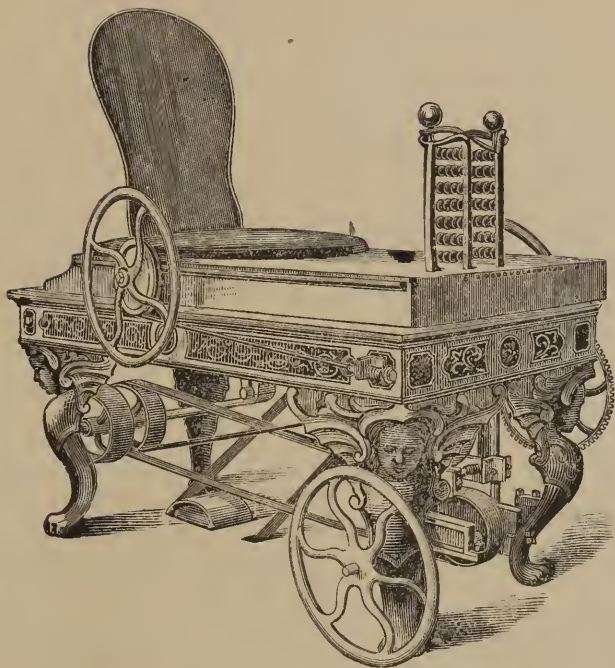






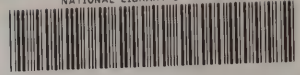








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